Smithsonian

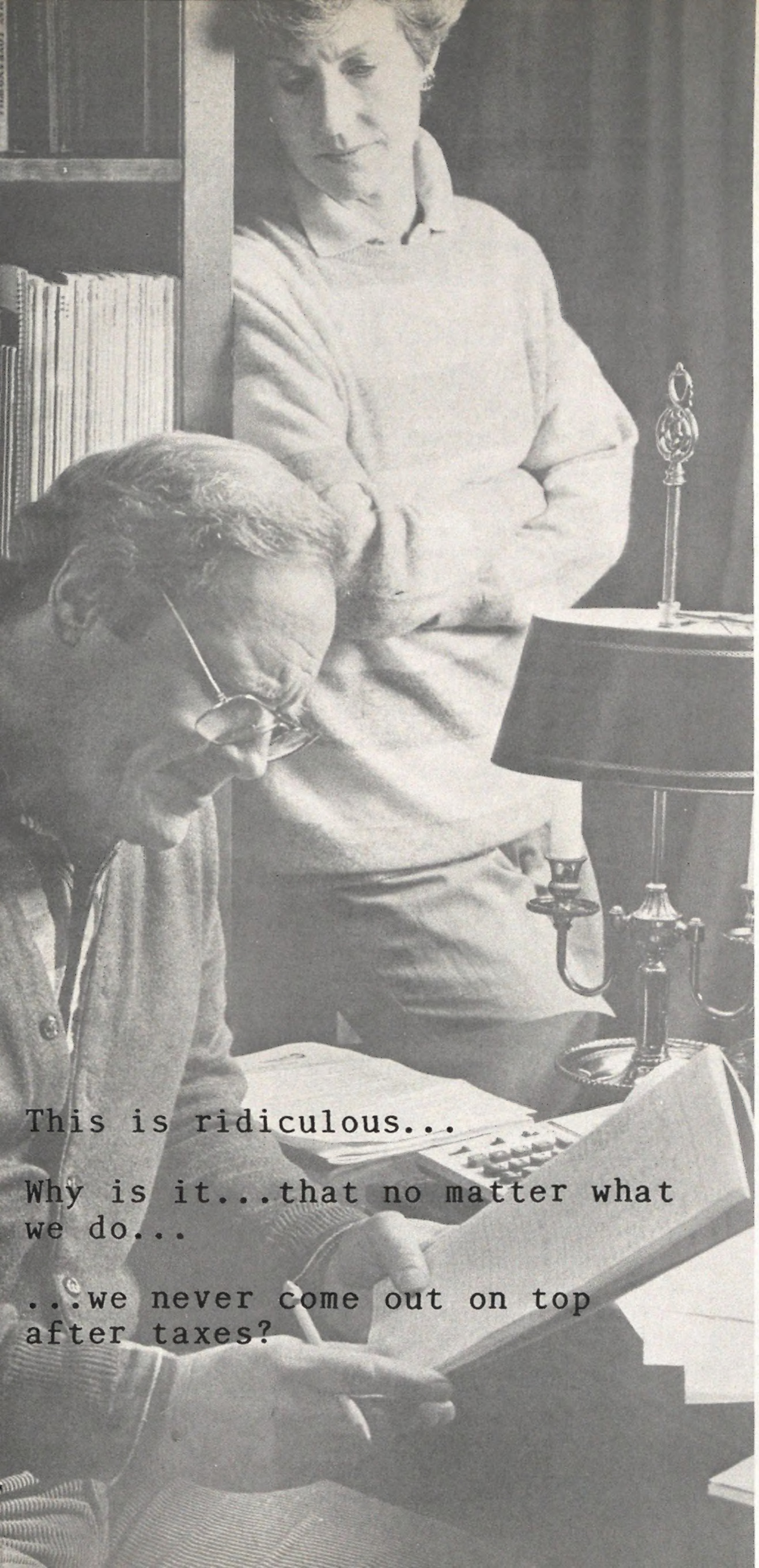
May 1987

After a folksy, countrified past, quilts are now having a ball as costly objets d'art (p.114)

THE BOLD LOOK
OF **KOHLER**®

At the edge of your imagination, fatigue dissolves into an oasis of pleasure. The Steeping Bath™ whirlpool. 5 feet long, 20 inches deep, and body-contoured for comfort. Shown here in Teal with Bravura™ faucet. See the Yellow Pages for a Kohler Registered Showroom, or send $3 to Kohler Co., Department AR5, Kohler, Wisconsin 53044.

C6020 Copyright 1986 Kohler Co.



Mary and Robert Webb
Ages: 43,42
Two children

Income	
Combined	$83,000

Estimated Expenses	
Income tax	$17,500
Mortgage	$12,000
Food, clothing, Insurance	$21,000
College Tuition	$16,000

Savings, CD's, Mutual Funds	$23,000

Needs
1)Tax-advantaged investments
2)Access to cash
3)Long-term security

Answers
John Hancock Single Premium Variable Life Insurance - offering investment options like: Stocks, Bonds, Money Market, Aggressive Stocks and Total Return Account.

Mary and Rob Webb want to pay less in taxes. Something that isn't easy to do since the recent Tax Reform. But with John Hancock Single Premium Variable Life they discovered it was easier than they imagined. The Webbs now put their premium in their choice of investment options and any money they earn is free from current taxes. Plus, if they need to get at their money, they can borrow at a low interest rate, and still keep a life insurance benefit. If you'd like more information on John Hancock Single Premium Variable Life, including charges and expenses, contact your local John Hancock representative for a prospectus. Read it carefully before you invest or send money.

Real life, real answers.

John Hancock
Financial Services

John Hancock Variable Life Insurance Co., Boston, MA 02117

Slip into something comfortable.

The 1987 Ford Bronco II is here.

Now Bronco II is even more versatile! For top performance, a 140 hp* V-6 is standard. So are new rear antilock brakes. And there's a choice of a new 2-wheel drive model as well as traditional 4-wheel drive.

5:38 p.m.
The work day's finally over!

As you walk across the company parking lot, you spot your Eddie Bauer

Eddie Bauer®

Bronco II waiting for you. Pop open the door and ahh...slide into your Captain's Chair, with its commanding view of the road. Adjust the tilt wheel just right and feel the comfort and luxury of your Bronco II's high-style interior. Now you've *really* slipped into something comfortable!

Start your engine.

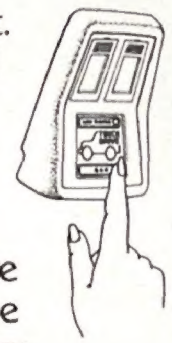
Turn the key. You just brought the Bronco II's 2.9L electronically fuel-injected multi-port V-6 engine alive. This powerplant is unbeaten by any standard engine in its class.

That's the brakes.

First stop is the florist. Pull out smartly into traffic. Wait...*hit the brakes!* Where did that puppy come from? Extra glad the Bronco II has rear antilock brakes. They help you make straight stops when operating in 2-wheel drive.

4-wheel drive detour.

Freeway traffic looks pretty bad. You should try this side road. Uh-oh—mud! Oh well, the Bronco II can handle it. Just press the optional electric "Touch-Drive" button and your Bronco II transforms to a 4-wheel drive machine—ready to give you the traction to ease through mud and snow. No stopping. No shifting. (Ford also offers a Bronco II 2-wheel drive model.)



It fits right in.

Everyone in town must be shopping at once. Good thing the Bronco II is small and compact. Yet, it's still large enough to carry all our camping equipment for the weekend. And the Eddie Bauer Bronco II comes with the "Ford Care" extended service plan**—24 months or 24,000 miles, whichever comes first. With 2 Captain's Chairs, there's only one problem you may have with Bronco II—deciding *who* gets to be captain and who's co-pilot!

Free air conditioning.

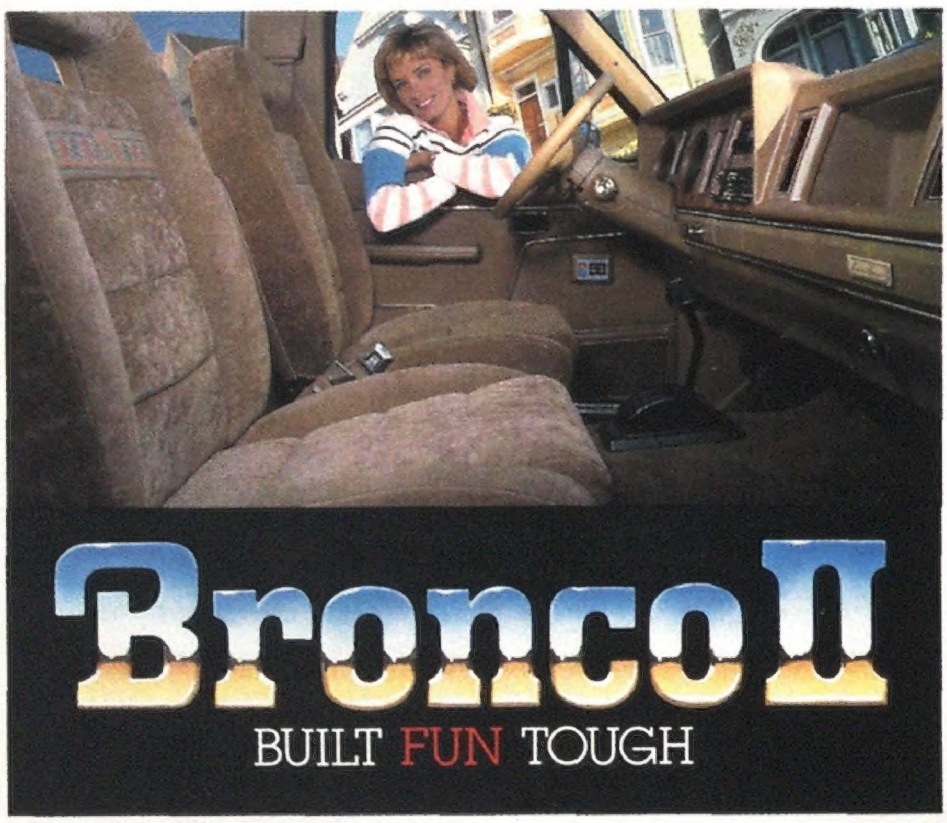
Free air conditioning is available when you buy any Bronco II Special Value Option Package. The option content varies with your choice of package. The savings are based on the manufacturer's suggested retail price for the Special Value Package compared to traditional suggested pricing for the options purchased separately.

Best-Built American Trucks six years running.

"Quality is Job 1." In fact, for the past six consecutive years, Ford quality has led all other American automobile companies. This is based on an average of owner-reported problems in the first three months of service on '86 models and in a six-month period on '81-'85 models designed and built in North America.

Buckle up—together we can save lives.

*Based on SAE standard J1349.
**Limited warranty. Ask to see a copy at your dealer.



Bronco II
Ford

May 1987

Smithsonian

Volume 18, Number 2

Table of Contents

Cover: Artist Virginia Jacobs' spherical quilt, Krakow Kabuki Waltz, surrounds a latex balloon; inflated by vacuum cleaner, it deflates for storage (p. 114)
Photograph by Enrico Ferorelli

12 *Smithsonian horizons* by Secretary Adams
17 *Letters to the Editor*
24 *Picture credits*
28 *Around the Mall and beyond* by Edwards Park
36 *Phenomena, comment and notes* by John P. Wiley jr.

46 **The Met's elegant new space for the new**
At New York's Metropolitan, modern art literally comes into its own: the Lila Acheson Wallace Wing
By Helen Dudar
Color photographs by Robert C. Lautman

60 **Ornithology's opportunists**
Cattle egrets, hyperactive and always hungry, are latecomers to the Americas—and they're thriving
By John Heminway
Photographs by Dan Guravich

72 **The Great Migration**
During 1915-40, a million black Southerners went North; the Museum of American History tells their story
By Jon Cohen

86 **Titanium the Magnificent**
In jets and joints, submarines, sunglasses and surgicals, an elusive metal beats all rivals
By James R. Chiles
Photographs by Michael Freeman

98 **Their mission: save lives in bad weather**
Coast Guard coxswains conquer the sea—and themselves—at the National Motor Life Boat School
By Michael Parfit
Photographs by Richard G. Shaw

114 **'At your quilting, maids, don't dally'**
For sleeping under and chitchatting over, nothing matched the covers that now cover gallery walls
By Joseph Harriss

127 **Sleuthing the Garden of Eden**
Using archaeology, the Bible, LANDSAT images, linguistics and more, Juris Zarins zeroes in
By Dora Jane Hamblin

138 **A home where the equids can roam**
Passionate for preservation, philanthropist William Gruenerwald harbors the horse's wild kin
By Jack Fincher
Photographs by Peter C. Poulides

154 **Louis L'Amour, laureate of the lariat**
The Western novelist plans an Americana library to house the history that his readers send him
By Donald Dale Jackson
Photographs by Chad Slattery

172 *Book reviews*
183 *Additional reading*
185 *May events at the Smithsonian*
190 *Smithsonian tours and seminars*

192 **'Wafted to Mars, he fights green Tharks'**
By Richard Wolkomir

Smithsonian (ISSN 0037-7333) is published monthly by the Smithsonian Associates, 900 Jefferson Drive, Washington, DC 20560.
© Smithsonian Institution 1987. All rights reserved.
Reproduction in whole or in part without permission is prohibited.
Subscription price $20 a year in U.S. possessions, $30 elsewhere.
80 percent of dues is designated for magazine subscription. Single copy price, $2.50. Second-class postage paid at Washington, DC, and additional entry points.
Editorial offices, 900 Jefferson Drive, Washington, DC 20560.
Advertising and circulation offices at 420 Lexington Ave., New York, NY 10170.
Members: Please address all subscription correspondence and change of address information to P.O. Box 55593, Boulder, CO 80322-5593.
Postmaster: Send 3579s to P.O. Box 55593, Boulder, CO 80302-5593.

THE LONGER IT LASTS THE LESS IT COSTS.

A KitchenAid® dishwasher is an investment in remarkable durability as well as superb performance.

It has been designed with innovative technology and is built with costly materials and great craftsmanship.

To see a KitchenAid dishwasher in someone's home is to know they want only the finest premium appliances for their kitchen. And over the years, the wholehearted enthusiasm of KitchenAid owners has built a reputation for KitchenAid dishwashers that the rest of the industry can only look upon with awe.

At every step of the dishwashing process, the KitchenAid Superba departs from ordinary dishwashers in extraordinary ways.

Right at the start, it eliminates the messy, time-consuming chore of rinsing off your dishes before loading. The KitchenAid Triple Filtration System has a hard-food disposer that grinds up food. So dishes go straight from the dinner table to the dishwasher without hand-rinsing. And still come out dazzling clean.

For literature write KitchenAid, Dept. C-48D, P.O. Box 3900, Peoria, IL 61614.

America's quality dishwasher is also America's first to eliminate loud dishwasher noise with a Whisper Quiet System. Whisper Quiet is so effective that you can talk on the kitchen phone or entertain guests and scarcely know that it's running.

It's another example of how KitchenAid engineering leads the way in innovative technology to provide you with a better quality of life.

Since the longer a dishwasher lasts, the less it costs, you owe it to yourself to see the incomparable KitchenAid Superba dishwasher.

KitchenAid®

KITCHENAID® FOR THE WAY IT'S MADE.™

MAKES COOKBOOKS COME ALIVE.

For the serious cook, there's nothing that meets the demands of the most challenging recipes with the power, versatility and dependability of a KitchenAid® mixer.

Its exterior is all metal, no plastic. Its heavy-duty motor performs with increasing power as the load is increased. And it has such durability that it's often handed down from mother to daughter.

And what the mixer can't do, the companion KitchenAid food processor will.

Together, they make cookbooks come alive.

KitchenAid®

For literature write KitchenAid, Dept. C-48M, P.O. Box 3900, Peoria, IL 61614.

KITCHENAID® FOR THE WAY IT'S MADE.™

Omaha Steaks International®
Since 1917

Try a little tenderness Make those special occasions truly memorable! Just try a little tenderness. Candlelight, soft music, and, magnificent, aged Filet Mignons. Perfect. Experts select and prepare each filet! Their artistry in cutting and aging is your assurance of utmost enjoyment. Steaks arrive frozen. Complete satisfaction guaranteed. **INTRODUCTORY OFFER:**

Six 6-oz. Filet Mignons, 1¼" thick (reg. $52.95) $29.95
(plus $4.50 shipping/handling)

YOU SAVE $23.00!
OFFER VALID IN 48 STATES UNTIL MAY 31, 1987.

SAVE EVEN MORE...
Twelve 6-oz. Filets at
Extra special price of $58.95
(plus $4.50 shipping/handling)

Limit - 2 packages per order
Phone or mail order. Use major credit card and

Call Free 1-800-228-9055
In Nebraska phone 0-402-391-3660 collect.
Order today or write for FREE catalog and 10% discount coupon.

Omaha Steaks International®
Dept. 1865 / P.O. Box 3300 / Omaha, NE 68103

Live Better.

In a house we design and build together. A Deck House. You provide the land, and a dream. We offer a quarter-century of experience helping people turn their dreams into homes that work better because they're built better.

DECK HOUSE

For the location of your nearest Design Service Center telephone 800·225·5755; in Mass. 617·259·9450. In the Southeast telephone 800·843·6144; in N.C. 919·467·5015.

Smithsonian

SECRETARY OF THE SMITHSONIAN INSTITUTION:
Robert McC. Adams

EDITOR:
Don Moser

BOARD OF EDITORS:
Constance A. Bond
Caroline Despard, Pictures
Jim Doherty
Timothy Foote
Marlane A. Liddell
Bennett Schiff
Nancy Seaman
Paul Trachtman
John P. Wiley jr.

ASSOCIATE EDITORS:
Diane M. Bolz
Frances R. Glennon
Sally Scott Maran
Edgar Rich, Pictures
Jane D. Scholl

ASSISTANT EDITORS:
Susana Barañano
Kathleen M. Burke
Judy Harkison
Bruce F. Hathaway
W. Eric Keller
Beth Py
Ruth Ravenel, Pictures

CONTRIBUTING EDITORS:
Ralph Backlund
Edwards Park

PUBLISHER:
Joseph J. Bonsignore

ADVERTISING:
Thomas H. Black, Associate Publisher
Edward A. Daly, Manager
Robert F. Donovan, Associate Manager
Frederick T. Lyons, Eastern Manager

CIRCULATION:
John O'Donnell, Director
Adeline Sherr, Associate Director

ADMINISTRATION:
Carey O. Randall, Associate Publisher
Mary Ellen Bobb, Business Manager
Valerie Martin

PRODUCTION:
E. Cherry Doyle, Director
Mary D. Haskin, Advertising Production
Greg Williams, Quality Control

FOUNDER:
S. Dillon Ripley

EDITOR AND PUBLISHER EMERITUS:
Edward K. Thompson

SENIOR CIRCULATION CONSULTANT:
Anne Keating

Expressions of quiet contemplation.

"Nostalgia" re-awakens the innocence and fragile dreams of youth we all once knew. Handmade and handpainted by Lladró, preserved in porcelain, she will become a personal treasure . . . like the memories she inspires.

LLADRÓ®

Authenticity guaranteed by the distinctive Lladró trademark on the base.
For information about the Lladró Collectors Society, write to: Lladró, 225 Fifth Avenue, New York, NY 10010

"Nostalgia" (L5071 6¼") © 1987 Weil Ceramics and Glass, Inc.

The Most Important Natura

The 50th Anniversary Edition

Roger Tory Peterson FIELD GUIDES

Bound in rugged, genuine leather and accented with 22kt gold.

Each Guide is a convenient 4¾" x 7½" size.
The rugged leather covers are flexible — easy to handle and use.

In the 1930's, Roger Tory Peterson saw a dream come true ... with a single book he turned bird watching and the appreciation of nature into one of the most popular pastimes in America.

That book? **A Field Guide to the Birds.**

Since then, many more books have followed ... a breathtaking array of Roger Tory Peterson Field Guides — written by Peterson and leading experts — covering the full spectrum of nature: **Birds, Butterflies, Wildflowers, Sea Shells, Stars and Planets, Weather and Atmosphere, Trees and Shrubs, Coral, Rocks and Minerals, Freshwater Fish** — some 35 titles in all. Together, they unlock the whole world of nature — enabling you to see, know and identify all of nature's wonders immediately by sight and by name.

A 50th anniversary "lifetime" edition.

Now, for the first time ever, and in honor of their 50th anniversary, this complete collection of Roger Tory Peterson Field Guides — will be bound in rugged, beautiful, genuine leather, housed in a hardwood display case and contain a volume autographed by Dr. Peterson.

The Easton Press has created an edition of superb quality. Each Guide is bound in beautiful, ruggedly supple leather. Each weather resistant cover is deeply embossed with a golden design. A ribbon marker is permanently affixed into each binding. And the papers used are groundwood-free, made to capture the full-color fidelity of illustrations. Each is thread-sewn to last for generations.

An autographed edition.

Roger Tory Peterson, a man who has earned numerous awards, including The Presidential Medal of Freedom, is generally acclaimed as the greatest bird artist since John James Audubon. Throughout the collection, key illustrations chosen by Peterson from his archives will be newly added to the Guides. You will also receive the classic **A Field Guide to the Birds** signed personally by Dr. Peterson.

Attractive hardwood display case free of additional charge.

This collection will create an exciting presence in your home. And your collection will have a proper setting! At no additional charge, you will receive an impressive hardwood display case, allowing you to show your books to their best advantage, while lending warmth and *dignity to your home.*

Available exclusively from The Easton Press.

The authorized 50th anniversary leather-bound edition will be available exclusively from The Easton Press. None will be sold in book stores.

You need send no money now. Simply complete the Preferred Subscription Reservation and mail it today.

History Library Ever Created.

Beautiful, detailed illustrations — each a work of art by itself — most in full color.

Prompt action required.
You are urged to mail your reservation promptly. This special edition may not be offered again.

This hardwood display case will be provided at no additional charge.

Sponsored By The National Audubon Society And The National Wildlife Federation

Preferred Subscription Reservation 455

ROGER TORY PETERSON FIELD GUIDES

The Easton Press
47 Richards Avenue
Norwalk, Conn. 06857

No Payment Required.
We will bill you.

Please send me the first volume of the Roger Tory Peterson Field Guides bound in genuine leather and reserve a subscription in my name. Further editions will be sent at the rate of one book per month at $30.50* each. This price will be guaranteed for the next two full years. I understand that I may return my book within 30 days for a refund, and that either party may cancel this subscription agreement at any time.

*Plus $2.50 per book for shipping and handling.

☐ As a convenience, I wish to pay for my first book now. I enclose $30.50 (plus $2.50 shipping and handling — a total of $33.00**).

☐ Please charge each monthly shipment to my credit card:
☐ VISA ☐ MasterCard

Credit Card No. _____ Expiration Date _____

Name _____

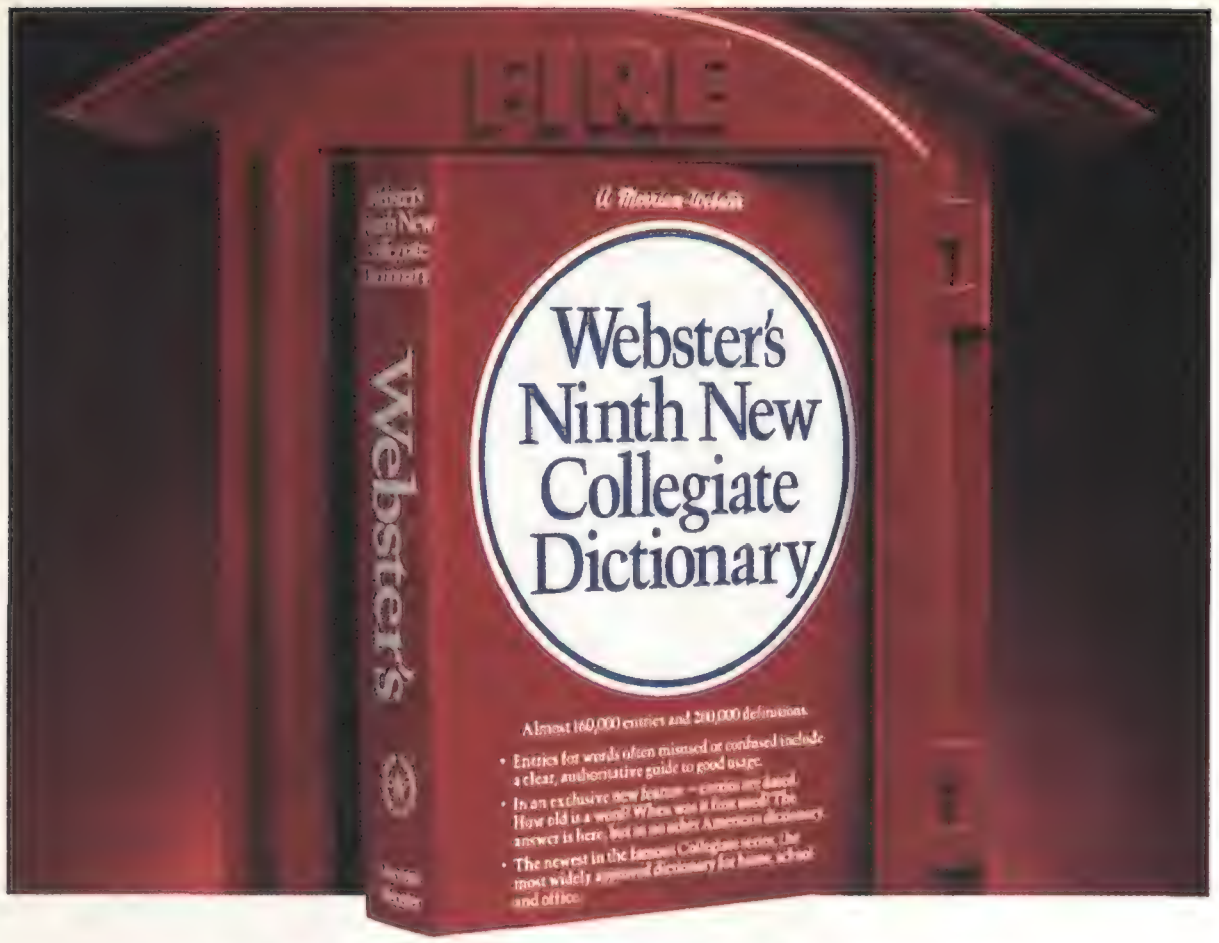
Address _____

City _____

State _____ Zip _____

Signature _____

***Conn. residents pay $35.47 to include sales tax. Please allow 8–12 weeks for shipment.*



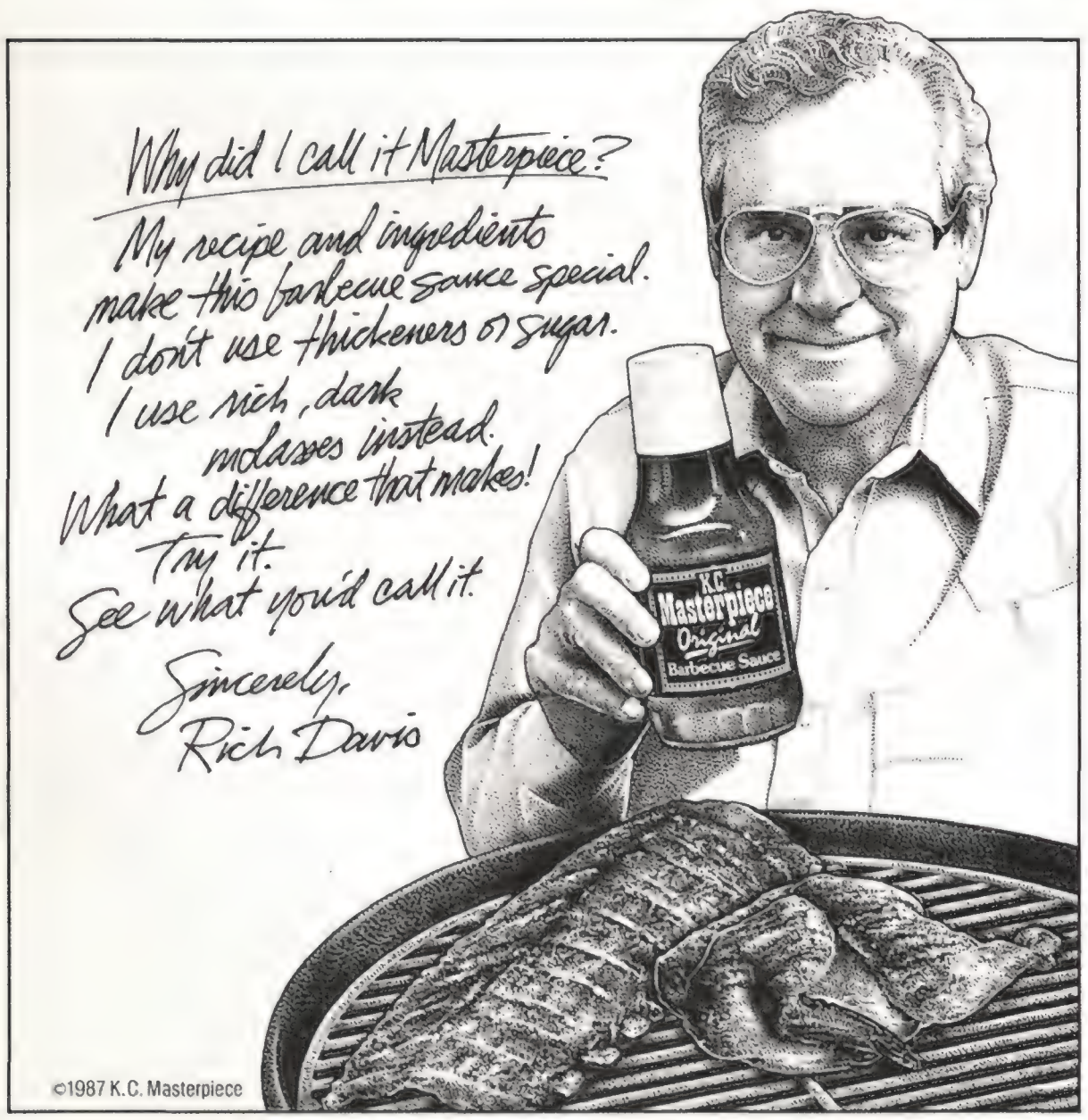
America's favorite to the rescue.

No other dictionary resolves more burning issues–how to spell it, how to say it, how to use it. And it's the only dictionary to tell you how old a word is.

A Genuine Merriam-Webster®

More people take our word for it.

© Merriam-Webster 1985


Why did I call it Masterpiece?
My recipe and ingredients make this barbecue sauce special.
I don't use thickeners or sugar.
I use rich, dark molasses instead.
What a difference that makes!
Try it.
See what you'd call it.
Sincerely,
Rich Davis
K.C. Masterpiece Original Barbecue Sauce
©1987 K.C. Masterpiece

Smithsonian

Board of Regents
Smithsonian Institution

Ex Officio

Chief Justice of the United States
William H. Rehnquist, Chancellor
Vice President of the United States
George H. W. Bush

Appointed by the President of the Senate

Honorable E. J. (Jake) Garn
Honorable Daniel P. Moynihan
Honorable James R. Sasser

Appointed by the Speaker of the House

Honorable Edward P. Boland
Honorable Silvio O. Conte
Honorable Norman Y. Mineta

Appointed by Joint Resolution of Congress

Honorable David C. Acheson
Honorable Anne L. Armstrong
Dr. William G. Bowen
Mrs. Jeannine Smith Clark
Dr. Murray Gell-Mann
Honorable A. Leon Higginbotham jr.
Mr. Carlisle H. Humelsine
Mr. Samuel C. Johnson
Mr. Barnabas McHenry

National Board of the
Smithsonian Associates

Mr. Charles D. Dickey jr., Chairman
Mrs. Joe L. Allbritton
Mr. Arthur G. Altschul
Mr. Philip F. Anschutz
Mr. Perry R. Bass
Honorable Lucius D. Battle
Mr. George B. Bingham jr.
Mr. William W. Boeschenstein
Mrs. I. Townsend Burden III
Mr. Frank T. Cary
Mr. James H. Clement
Mr. Jeffrey A. Cole
Mrs. Robert Donner jr.
Mr. Marshall Field
Mr. W. L. Hadley Griffin
Mr. Gerald D. Hines
Mr. S. Charles Kemp
Mr. Thomas M. Keresey
Mr. Howard M. Love
Mr. Brooks McCormick
Mr. Alexander K. McLanahan
Mr. Arjay Miller
Mr. Charles H. Murphy jr.
Mr. Jack S. Parker
Mr. Sidney R. Petersen
Mr. Charles W. Schmidt
Mrs. George M. Seignious II
Mrs. Edson W. Spencer
Mr. Malcolm T. Stamper
Mrs. James M. Walton
Honorable John C. Whitehead
Mr. J. Tylee Wilson
Mrs. Peter G. Wray

Honorary Members

Mr. William S. Anderson
Mr. Richard P. Cooley
Mr. Joseph F. Cullman III
Honorable Leonard K. Firestone
Mr. Alfred C. Glassell jr.
Honorable William A. Hewitt
Mr. James M. Kemper jr.
Mr. Seymour H. Knox III
Mr. Lewis A. Lapham
Honorable George C. McGhee
Justice Sandra D. O'Connor
Mr. S. Dillon Ripley
Mr. Francis C. Rooney jr.
Mr. Merritt Kirk Ruddock
Honorable Thomas J. Watson jr.

Here's your chance to achieve a small moral victory.

What would you do if you saw a lost, frightened child?

You'd probably stop, pick her up, brush away her tears, and help her find her way. Without even thinking about it. And there's a reason.

You know what's right.

And right now, you can do just that. You can act on instinct...by reaching out to *one* desperately poor child, thousands of miles away.

Through Foster Parents Plan, you'll be helping a child who almost never has enough to eat. A decent place to sleep. Medical care. The chance to learn. Or hope.

It's your choice.

You can even choose the child you'd like to sponsor. A boy or girl. In a country where *you'd* like to help. You'll be helping that child within her own family. And more, helping that family to work with other families to make a better life for their children.

In return, you'll receive pictures of the child. Detailed progress reports. And letters written in the child's own words. You'll see for yourself just how much you're changing your Foster Child's life for the better. Forever. And for so little.

In fact, for just $22 a month, you'll make it possible for a child to have food, medical care, schooling—and hope. That's only 72¢ a day.

Imagine. Your spare change could change a child's life.

Please don't wait.

If you saw a helpless child on the street, you wouldn't wait. You'd help that instant. Please don't wait now, either. Send in the coupon—or call toll-free 1-800-225-1234.

And achieve a small moral victory that can make a big difference to a needy child.

To start helping even faster, call toll-free:

1-800-225-1234

Founded in 1937, Foster Parents Plan is the leader in combining family assistance programs, community development, and personal communications between Foster Parent and Foster Child. These comprehensive programs provide long-term solutions to the unique problems facing Foster Children and their families. As a non-profit, non-sectarian and non-political organization, we depend on Foster Parents to make our work possible. A copy of our financial report, filed with the New York Department of State, is available on request. Your sponsorship is tax-deductible.

Foster Parents Plan®

Help so complete, it touches a child for life.

Detach and mail or call toll-free today. (N6)

Send to: G889

Kenneth H. Phillips, National Executive Director
Foster Parents Plan, Inc., 157 Plan Way, Warwick, RI 02886

I want to become a Foster Parent to:

☐ **The child who has been waiting the longest,** or as indicated:

☐ Boy ☐ Girl ☐ Either
☐ Any age ☐ 6–8 ☐ 9–11 ☐ 12–14

☐ Bolivia	☐ Guatemala	☐ Kenya	☐ Philippines
☐ Burkina Faso	☐ Honduras	☐ Liberia	☐ Sri Lanka
☐ Colombia	☐ India	☐ Mali	☐ Sudan
☐ Ecuador	☐ Indonesia	☐ Nepal	☐ Thailand

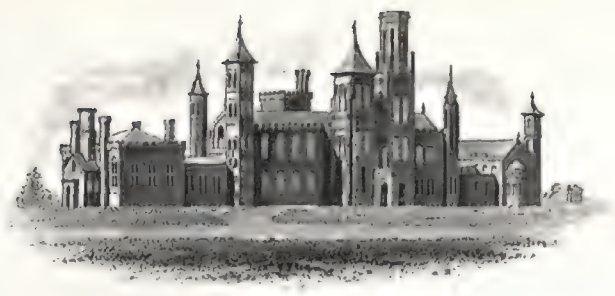
☐ Enclosed is a check for $22 for my first month's sponsorship of my Foster Child. Please send me a photograph, case history, and complete Foster Parents Sponsorship Kit.

☐ Please send me information about sponsoring a child overseas.

☐ Mr. ☐ Mrs.
☐ Miss ☐ Ms.

Address Apt.#

City State Zip



Smithsonian horizons

We have an obligation to return the Indian skeletal remains in our collections to tribal descendants

The past is another country, although seldom marked off by any well-defined watersheds or frontiers. Finding absent what we now take for granted can be disconcerting. Equally disconcerting is an encounter with acts and attitudes that we would prefer to forget were ever part of our historic heritage.

In 1862 an Army Medical Museum was established in Washington. The study of specimens illustrating war-related causes of death and disease would, it was hoped, help to reduce mortality and suffering. Early collections were made on the Civil War battlefields of Antietam, Fredericksburg and Gettysburg (including the amputated leg of Maj. Gen. Daniel Sickles, who in later years periodically returned to see it), while others were acquired from hospitals or by purchase. Barrels of whiskey seem to have been the best (or most widely available) preservative for soft tissue, making it less than surprising that the Museum's permanent holdings concentrated on skeletons.

At the end of the Civil War the Museum's only available field of action shifted westward. As the struggle for control of Indian lands entered its final, climactic decade, Army medical officers on active duty there were urged to continue to seek osteological and other specimens. Animal pathologies and "monstrosities," stinging insects, reptiles and miscellaneous curiosities all began to find their way to Washington from frontier postings.

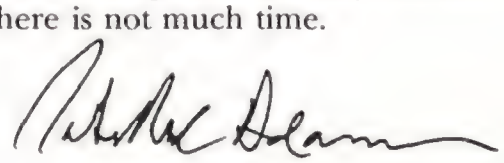
However, Indian weapons, relics of all kinds, and especially skulls were the major target of interest. Ostensibly these collections were "to aid in the progress of anthropological science by obtaining measurements of a large number of skulls of the aboriginal races of North America." In some regions, remains left by long-vanished Mound Builders were a handy source of supply. Western battlefields were another collecting ground of choice. And in the same zealous spirit, where better might well-preserved remains be found than in Indian cemeteries still in use? A few craniums were reportedly severed and exhumed by dark of night, not long after their interment.

The Smithsonian's role was largely passive. By the mid-19th century, gifts, explorations and archaeological excavations had already brought human skeletons into its collections. Now a new institution was involved in the same effort. In an avowed interest in "harmonious cooperation" between duly authorized governmental establishments, and probably bowing to circumstance, Secretary Joseph Henry in 1869 proposed an exchange that defined separate spheres of activity. Our specimens relative to human and comparative anatomy, nearly 1,600 in number, were transferred to the Army Medical Museum. In return, the latter's considerable holdings "illustrative of the manners, customs and arts of the Indians of this continent" came to the Smithsonian. The division of labor continued, to all appearances amicably, until the Army's interests took a different turn at the outbreak of the Spanish-American War. Shortly thereafter, skeletal remains representing nearly 4,000 individuals came (or, in many cases, came back) to the Smithsonian, where they remain today.

So far, nothing has been said about how the Indians felt about all this. In an admittedly limited perusal of the archives, I have not found their feelings mentioned. But we are now in a different era, with different sensitivities and with rights less casually delimited on the basis of ethnic identity. In court proceedings, Congressional hearings, and publications of many kinds, modern native Americans are having a lot to say about it, angrily and eloquently.

Craniums stolen from actively used burial grounds were illicitly taken and must be returned to their tribal descendants. Stolen or not, we at the Smithsonian recognize an obligation to return all remains that are individually identifiable from accompanying records. Battlefield pick-ups are always a difficult problem. Individuals can almost never be identified, and with tribes often having fought in alliance, to whom can remains be returned?

Yet to be faced is the issue of archaeologically recovered skeletons reflecting many millennia of the prehistoric occupation of North America. Only archaeology, in the absence of written records, can uncover this important chapter of the whole human story. It cannot be forgotten that these large collections of skeletal materials, especially where they can be accurately placed in space and time and tribal affinity, are scientifically *useful.* New laboratory techniques establish broad outlines of ancient dietary intake and genetic codes. Positive contributions to modern native American health problems are a not unrealistic possibility. But first a lengthy and unfortunate record has to be acknowledged, and a basis found for mutual trust in spite of it. Through a blur of possibly jumbled specimens and archival ambiguities, the potentially conflicting claims of tribal affinity, private ownership and scientific freedom of access need to be somehow brought into balance and adjudicated. The past is a heavy burden, and there is not much time.



You now have the option to change how you feel about driving

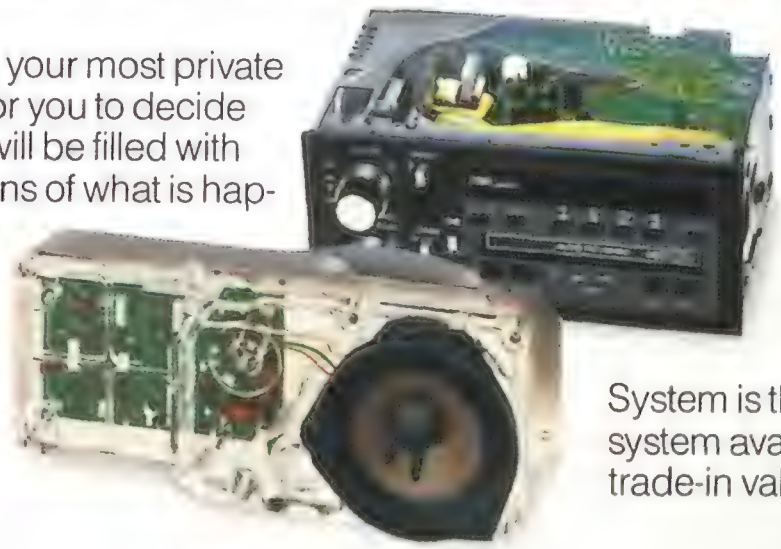
Your automobile provides your most private moments of the day. It is for you to decide whether these moments will be filled with the tensions and frustrations of what is happening outside or with the relaxation and enjoyment that could be yours on the inside. And music of your choice, reproduced with incredible clarity and realism, can make the difference.

Our experience has convinced us that, regardless of your interest in music, you will require less than one minute of listening to know that you want the Delco/Bose Music System in your next General Motors car.*

Only through this listening experience will you fully appreciate why the Delco/Bose System is the most highly reviewed music system available and why it adds to the trade-in value of your automobile.

It is your option, and it is now available in over a dozen different GM automobiles.

*Available in selected models.



Delco BOSE

Sound so real, it will change how you feel about driving.

BOSE®
Better sound through research.

Delco Electronics
Subsidiary of GM Hughes Electronics

Crescent Street, Montréal

Downtown Montréal
Reflected in the St. Lawrence River.

At your service
With the hefty premium on your U.S. dollar, staying first-class is surprisingly affordable.

Enjoy Montréal's 'joie de vivre'

This side of Europe, there's really nothing like it. The picturesque ambiance of the Old Town, the stately boulevards and chic boutiques uptown, and the view from the mountain of the skyline and the majestic St. Lawrence River.

Montréal is full of flair and foreign flavour. From the simple pleasures of the open-air cafés and bistros, to the culinary triumphs of some truly gourmet restaurants, it's very much a city to be savoured. And with your U.S. dollar enjoying a substantial premium, you can save as well. This summer, come say bonjour to Montréal, just over the border, in the world next door.

For information call: 1-800-443-7000 from the Eastern United States, and (toll call) 1-514-873-2015 elsewhere in the U.S. Please ask for Operator 701.

A gourmet delight
Prepared à la nouvelle cuisine.

La Ronde
On the grounds of the 1967 World's Fair, a summer long amusement park for the whole family.

Canada
The World Next Door

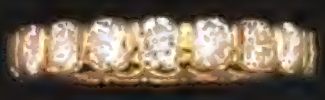
"Suddenly it feels like when it all began."

De Beers

The Diamond Anniversary Ring.

A band of diamonds that says you'd marry her all over again.

A diamond is forever.



Letters to the Editor

Smithsonian horizons

Dear Sir: I hope that the Institution will be able to document for future generations the crucial relationship in our society between television and shopping malls. They are the bastions of today's American cultural identity, from Oahu to Long Island. The products found on TV and in the malls are the objects by which this mall culture defines itself.

Beginning with Farrah Fawcett's prototypical *Charlie's Angels* hairdo, what is the history of the evolution of the suburban girl's feathered mane? A more specialized area of study would be the relationship that binds MTV and teen hair fashions, such as the phenomenon of the bleached, braided "tail" dangling from the nape of the neck.

Todd Masuda
New York City

Kyoiku *mamas*

Dear Sir: When I read your article my thoughts went to my three-year-old and the joy and openness with which she pursues her daily life. The idea that my mental image of her gamboling through the fields in her big rubber boots, sliding in the mud, and laughing, shining, glowing through it all could be replaced by an image of her learning to "march correctly around the classroom" angers, disgusts and saddens me.

In my work I deal with people who have been locked into a small segment of life by lack of education and vocational opportunity. Aren't these Japanese children locked in, just as tightly, just as hopelessly, by "education"?

At a time when the concept of a global community has been advanced broadly and the idea of isolation, be it by an individual or a culture, has a clear negative impact on growth and potential, this type of education is curious. Why would anyone want to impose such structure upon the grace and freedom of childhood?

Phillip A. Wentz
Sherwood, Oregon

Dear Sir: I'm curious to know, after the children are educated, married and working, when all of Mom's duties and goals are met, what becomes of her? The nth degree of empty-nest syndrome?

C. J. Napolitano
North Andover, Massachusetts

Options for Japanese mothers once the children are grown do not seem so different from those of their Western counterparts. Many take classes in ikebana *(Japanese floral art), tea ceremony, English, art, cooking. They meet friends, play cards, travel in groups. A number get part-time jobs. The extra income is valued. The number of mothers working full time is very small and those who do are generally seen as shirking their responsibilities as wives and mothers.* Ed.

Costa Rican rain forest

Dear Sir: Your article illustrated the alarming rate of destruction of tropical rain forests throughout Africa, the Pacific, and Central and South America. Unfortunately, U.S. taxpayers are helping finance a large portion of this deforestation through such multilateral lending institutions as the World Bank and InterAmerican Development Bank.

Most tropical rain forests are in fragile, relatively infertile lands. When the forest cover is removed, the soil, exposed to torrential downpours, is eroded rapidly. The productive capacity of the land is soon lost, decimating the region's economic, social and ecological structure. By promoting and financing policies to cut tropical forests, overgraze fragile rangelands and introduce nonsustainable agricultural techniques, we are squandering the biological and economic wealth of many less-developed nations.

We need to promote, through unilateral and multilateral assistance programs, the utilization of resources on a sustainable basis. The decisions we are making right now will determine the natural heritage available to our heirs and the stability of emerging nations.

Senator Robert W. Kasten jr.
Senate Foreign Operations Committee
Washington, D.C.

"Maybe better."

Make every day a milestone
with a Diamond Anniversary Ring fror

THE MÉMOIRE COLLECTION®

Over 100 classic styles
For memories past and
those to come

call: in USA 1-800-345-7508
in PA 215-938-0721

© 1987, MÉMOIRE CORPORATION

In California, available at:

BULLOCKS WILSHIRE
THE SPECIALTY STORE

2500 B.C. FORGERY FOR SALE.

Exquisite 2500 B.C. figurine from a unique museum collection of Cycladic and ancient Greek art. Exact reproduction in resin, hand-patinated. Additional museum pieces of sculpture and jewelry, in bronze and silver. Send for our color brochure. US $2.

MUSEUM OF CYCLADIC & ANCIENT GREEK ART

Post Office Box 92, Bowling Green Station,
New York, NY 10274. Allow four weeks for delivery.

Great idea for Father's Day

Give A Year Of Delightful Puzzles – Just $25.00!

Four original, Sunday-size puzzles by mail every month. Edited by Will Weng and printed on fine, heavy paper, each numbered puzzle includes the solution to the one before along with a commentary by Mr. Weng.

THE CROSSWORDS CLUB™

Order now! We'll send you an elegant card to announce your gift, and we'll start the new member with next month's puzzles.

Your Guarantee: Not delighted? Just drop us a line and we will promptly refund your payment in full.

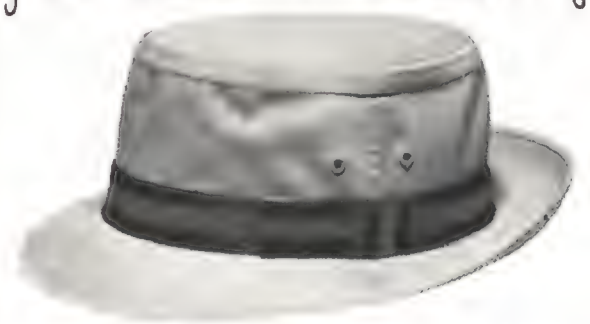
It's easy to order! Send check for $25.00 or charge MasterCard/Visa.

Mail to: The Crosswords Club
Dept. 753 • 123 Elm Street
P.O. Box 635
Old Saybrook, CT 06475

Order Today!

Or Call Toll Free (800) 874-8100
(in Connecticut (203) 388-6627)

Our Practical Poplin Travel Hat $18



This is truly an all-weather, year 'round hat—great in the wet and wind, and when the weather turns warm, it serves equally well at the beach, on deck, on the fairway. You can soak it, crush it, pocket it—the lightweight, water-repellent Dacron/cotton poplin springs back into shape. British tan or navy. Sizes 6¾ to 8.

Phone Orders: (415) 397-7733

☐ *$3 enclosed for 1 yr. catalogue subscription. (Applicable toward future purchase.)*

Q1D017

Cable Car Clothiers
ROBERT KIRK, Ltd.
San Francisco's British Goods Store Since 1939

Mail Orders: No. 150, Post St., S.F. Ca 94108
Hat (71145Q): Size____ Col.____ Qty.____
☐ Check ☐ MasterCard ☐ VISA ☐ Amer. Ex.
Card #____ Expir.____
Add $2 ship., hdlg.; Cal. delivery add sales tax
Name____
Address____
Zip____

Dear Sir: As an ecologist and soil scientist conducting research in Costa Rica, I would like to comment on two points in Ms. Omang's article.

She describes the land beneath the forest as "poor" and subject to "rocklike laterite" formation. This land is not subject to laterite formation, a process that occurs in very few places in the world, most notably in parts of India and East Africa. Most Costa Rican soils are nutrient-rich, derived from volcanic ash. However, when exposed for cultivation, they are subject to erosion and loss of fertility through leaching of important nutrients.

Although Ms. Omang cites CODEFORSA as a ray of hope for rain forest conservation, there are other activities within Costa Rica aimed at slowing the rate of rain forest destruction. The *Centro Agronómico Tropical de Investigación y Enseñanza* (CATIE) is conducting research in agroforestry, an agricultural practice that incorporates multipurpose trees with either annual crops or pasture. CATIE is using native leguminous trees that fix nitrogen from the atmosphere in combination with corn, cassava and perennial pasture grasses. These trees protect the soil from damaging rains and provide sources of fuel, nutrient-rich mulch, and fodder for livestock.

The system is highly suited to small farmers because it requires few fertilizers and pesticides and appears relatively self-sustaining. Field experiments and on-farm research projects have yielded promising results, and have enormous potential for decelerating the current rate of rain forest destruction.

Leslie Cooperband
PhD candidate, Department of Agronomy
Ohio State University
Columbus

Old-time radio

Dear Sir: After World War II, one of Seattle's radio stations was faced with the task of discarding recordings of World War II news reports that had been stored in a local warehouse. Their news value had long vanished, but their historical value was another thing.

Professor Milo Ryan of the University of Washington's School of Communications learned of the pending destruction and prevailed upon the station to contribute them to the university. His students then catalogued them, and they are now in the National Archives.

Edwin G. Payne
Bellevue, Washington

Shown actual size of 5-1/4" high.

"Guess what. I slipped on the ice and fell. Me.
How am I going to live it down? And you know who saw me?
Michelle Emblem. She's a famous artist, and she did this portrait of me."

"Then, they put me in porcelain! (so I'd be 'immortalized').
Oh, it's all too embarrassing. But do me a favor—
please try not to laugh too much."

Whoops! by Michelle Emblem will be meticulously crafted in fine porcelain and hand-painted to capture the bright contrast that makes this little fellow so distinctive. Sleek black wings and snow-white fur. The orange and black bill. And the look of pure astonishment carefully re-created in his yellow penguin eyes.

Whoops! is an original work of art available *only* from The Franklin Mint. This imported porcelain sculpture will not be sold in any stores or galleries. To acquire it, just mail the accompanying reservation by May 31st.

Crafted in fine porcelain. $60

RESERVATION FORM

Whoops! BY MICHELLE EMBLEM

Please mail by May 31, 1987. • Limit of one sculpture per person.

The Franklin Mint
Franklin Center, Pennsylvania 19091

Please accept my reservation for *Whoops!* by Michelle Emblem, an original sculpture to be crafted in fine porcelain and hand-painted expressly for me. I need send no money now. I will be billed in four equal monthly installments of $15.* each, the first payment due in advance of shipment.

**Plus my state sales tax and a total of $3. for shipping and handling.*

Signature _____
ALL RESERVATIONS ARE SUBJECT TO ACCEPTANCE.

Mr./Mrs./Miss _____
PLEASE PRINT CLEARLY

Address _____

City, State, Zip _____

© 1987 FM

THE STOMACH ELIMINATOR®

The Original 3 Spring Stomach Exerciser Has Now Been Made Even Better

In little more than a year we have sold well over 400,000 of our original 3-spring Stomach Eliminator® from Italy. And no wonder,the Stomach Eliminator® weighs less than 2 lbs., costs less than $20 and can be used almost anywhere. Best of all, it truly works for men and women in reducing your stomach and toning up your entire body.

3 Springs Are Better Than One

When the success of our Stomach Eliminator® became known several companies came out with one spring lookalikes from Taiwan and the Orient. Our original 3-spring Stomach Eliminator® has several significant advantages over these one spring copies: 1) The ability to increase your workout as you improve with 1, 2 or 3 springs 2) Greater portability because the unit disassembles 3) A stronger and better workout because the 2 and 3 spring levels provide greater exercise than the one spring copies.

New High Tech Design

We recently further improved the Stomach Eliminator® by completely redesigning it. Still made in Italy, the new model is lighter, stronger and simpler to adjust. Featuring unbreakable molded plastic handlebars and foot stirrups, 3 adjustable tension springs and double security nylon attachment clips, the new all-black Stomach Eliminator® is now a better looking and an even more effective stomach exerciser.

10 Minutes a Day and Your Pot Belly Will Be Gone

That's our guarantee. If you're not satisfied with how it works for you, return it for full refund. There are seven simple exercises to do and you can do them almost anywhere: In a hotel room, in your home, in your office, etc.

Also Slims Thighs, Hips, Arms and Legs

The Stomach Eliminator® is not just a stomach exerciser. It slims and tones thighs, hips, arms, legs, shoulders and even facial muscles.

Just $19.95

OUR UNCONDITIONAL GUARANTEE: If you are not completely satisfied with the Stomach Eliminator®, return it anytime for full and prompt refund.

Cecil C. Hoge, Jr.
Harrison Hoge Industries, Inc.

RUSH ORDERS

Credit Card Orders
Call Toll Free ANYTIME

1-800-922-4800 Ext. 763

FEDERAL EXPRESS DELIVERY JUST $3.

Delivery Guaranteed Within 3 Working Days

The Stomach Eliminator® . . **$19.95** each
N. Y. residents please add sales tax

FEDERAL EXPRESS DELIVERY **$3**

Send mail orders to:

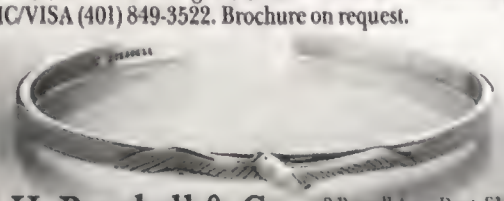
Harrison-Hoge Industries, Inc.
Dept. 763
P.O. Box 944
Smithtown, NY 11787

3-DAY CRUISE
VIKING EXPLORER
34-passenger mini-cruiseliner

Mississippi River Cruises
between St. Paul & LaCrosse, WI.
Weekly from 6/19/87-10/5/87. Only $375
Call for reservations 1-800-328-1472 or write
Padelford Packet Boat Co., Inc.
Harriet Island, St. Paul, MN 55107

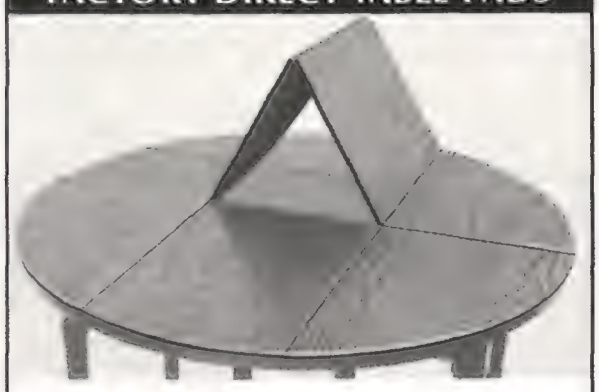
SILVER SEAGULL

Newport Silversmith James Breakell captures the grace and beauty of the seagull's flight in this lovely bracelet. In sterling silver, $25.00. In 14K gold, $225.00. Add $4.00 handling. MC/VISA (401) 849-3522. Brochure on request.



J.H. Breakell & Co.
2 Russell Ave., Dept. SMS
Newport, RI 02840

FACTORY DIRECT TABLE PADS



Order with confidence from America's oldest and largest custom table pad manufacturer.

Phone 1-800/328-7237 Ext. 275

108 Briarcliff, Thomasville, NC 27360
612/646-6778—Ext. 275

© SENTRY, 1986

Sentry TABLE PAD CO. SINCE 1911

Dear Sir: Leonard Maltin's piece reminds us of how unfortunate the TV generations are to have been denied those daily exercises for the unfettered imagination.

When I was a young man in broadcasting we talked a lot about the difference between techniques of writing for the eye and writing for the ear. We spoke the names of Arch Oboler and Norman Corwin with reverence because they wrote brilliantly for the ear. The closest we can get today is the *Prairie Home Companion*, when Garrison Keillor performs his monologues.

While I never learned to write for the ear, I can easily detect the difference between Keillor's spoken and written versions of a story. The magic of the one does not translate into the other.

Langley Wood
Lynchburg, Virginia

Dear Sir: Between Al Jolson, the *Chicago Theatre of the Air, Let's Pretend, Lux Presents Hollywood, Quick as a Flash* and dozens more, my little Emerson certainly got an exhaustive workout.

By the age of 12 or 13, my career was cut out for me. And so in the early 1950s I went to work for one of the large recording studios in New York City, transferring original ETs (electrical transcriptions) to tape, equalizing and depopping each click manually. It pleased me to rescue *The Green Hornet, The Shadow* and Martin Gabel's *On a Note of Triumph* from oblivion.

Without computers, electronic typewriters and all of today's technology, the radio of yesteryear had to use *talent*. Who knew of the coconut-shell horses' hooves or that the big, burly voice of the Irish cop belonged to a guy who barely made five feet in his Adler elevator shoes? And how many knew that ETs were cut by hand—a hand as precise as a diamond cutter's?

It's all too sorrowful that today our choice is between top-40s elevator music or continuous news—almost all lacking the one basic ingredient that made radio the "theater of the mind"—talent.

George Roberts
Mountainside, New Jersey

The Way of the Forty

Dear Sir: The hardy and daring nobles who resided at Elephantine, near the modern Aswan Dam, in the time of Pharaoh Pepi II were indeed in charge of trade with the land of Punt. That country, however, located at the mouth of

Mass uprisings in New Zealand's countryside.

While it may seem like the rest of the world's in turmoil, the best of New Zealand's in bloom!

New Zealand still has what much of the world has lost sight of. Like evening strolls and trusting souls. We still take life as it comes and give you more for your money. But even though the values are old-fashioned, the accommodations are the latest.

Escape to our 3 warm, green islands in the South Pacific. Settle down on a 90-mile-long beach. Or fly up to a year-long glacier. See unspoiled natural scenery and be spoiled by unsurpassed native hospitality.

Everything's right, right here! So send for your free New Zealand Book today.

NZTP

New Zealand Tourist & Publicity Office,
10960 Wilshire Blvd., Suite 1530, Los Angeles, CA 90024.
Give me the low-down on New Zealand's local colour.

Name_____

Address_____

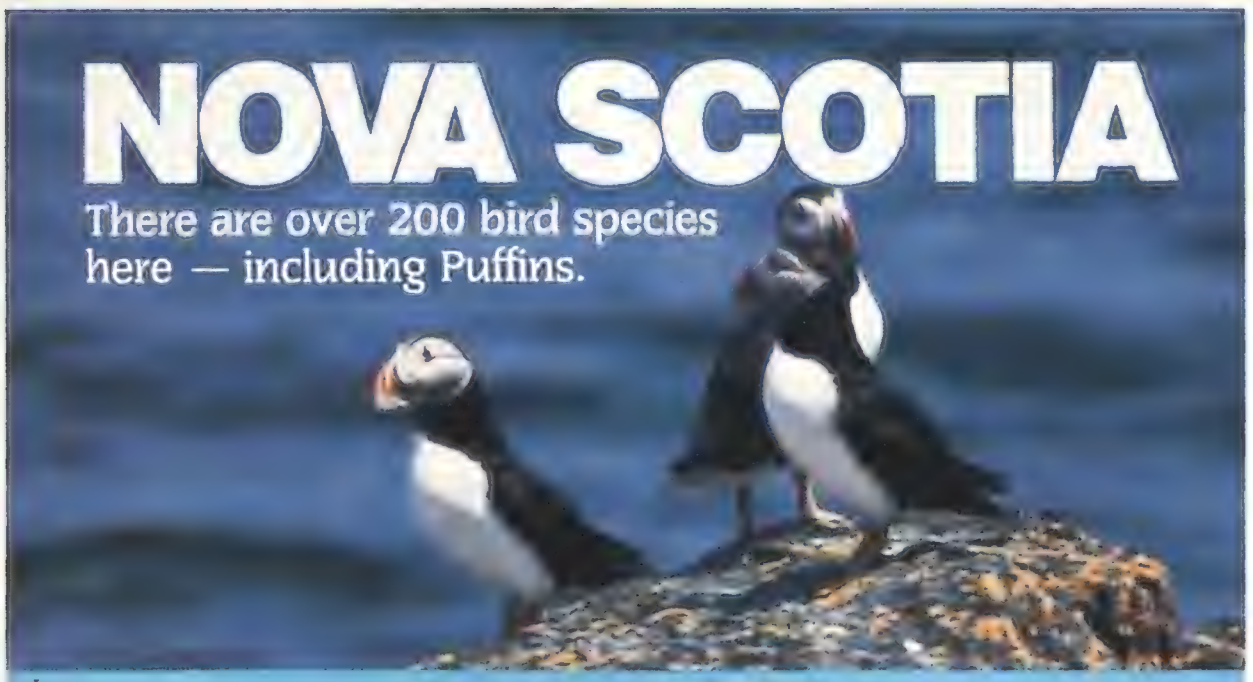
City/State/Zip_____

SM587

The climate is right for New Zealand.

NOVA SCOTIA

There are over 200 bird species here — including Puffins.



Nova Scotia Tourism, P.O. Box 130, Halifax, Nova Scotia, Canada B3J 2M7 Detach here SM2

Please rush me the 250-page Nova Scotia Tourism Guide. Includes 9 fold-out, full colour maps, plus complete information on this unique corner of Canada. Only $1.50 (postage and handling). Please send cheque or money order, payable to Nova Scotia Tourism. (Don't mail cash.)

NAME _____

STREET _____

CITY _____

STATE _____ ZIP _____

Or call toll free: 1-800-341-6096 (In Maine only, 1-800-492-0643)

No one knows Nova Scotia better than Air Canada. For information and reservations call: 1-800-4-CANADA

AIR CANADA

NOVA SCOTIA so much to see

The Honourable Jack MacIsaac
Minister of Tourism

INFLATABLE KING SNAKES

Our exclusive inflatable models of the California Mountain (24" x 20") and Common King (40" x 26") Snakes are accurately detailed in four colors on heavy-gauge vinyl. Extraordinary sculptured models inspired by the American Southwest.

$16.95 postpaid per pair

THE NATURE COMPANY

BERKELEY
SAN FRANCISCO
PALO ALTO
CORTE MADERA

CARMEL
COSTA MESA
SAN DIEGO
SEATTLE

ORDER TOLL-FREE 800-227-1114

Use Visa, M/C, AMEX or send check to: The Nature Company, Dept. SM, P.O. Box 2310, Berkeley, CA 94702. (Calif. add 6% sales tax)

SEND $1.00 FOR OUR LATEST CATALOG

AN AMERICAN TREASURE

THE 1986-87 STEUBEN CATALOGUE

The Steuben Catalogue presents 20 new designs amidst 144 pages of brilliant crystal objects. A wide array of gift ideas and selections for collectors. Priced from $125. Enclose $5.00 cash or check with this coupon.

STEUBEN GLASS
Catalogue Department
Fifth Avenue at 56th Street, New York, N.Y. 10022

Name _____

Address _____

City _____

State _____ Zip _____ S4

the Red Sea on the Somali coast, was reached only by ship.

The arduous and dangerous expeditions of caravan conductor Harkouf, undertaken some 42 centuries ago, were overland treks to innermost Africa.

Harkouf returned from his fourth journey to a land called Yam in command of a pack train of more than 300 asses. The gentle beasts were laden with gold, ostrich feathers, logs of ebony, panther skins, ivory tusks and the famous dwarf, who probably came from one of the pygmy tribes of far-off central Africa or the region around Lake Chad. Certain it is that his homeland was not the land of Punt.

Alexander Cutrules
Yuma, Arizona

Satellite rescue network

Dear Sir: As a Colonel in the Civil Air Patrol for 30 years, I can attest that the combination of ELTs (Emergency Locator Transmitters), the international satellite rescue network and our excellent U.S. Mission Control Center at Scott Air Force Base have greatly improved the CAP's search-and-rescue capability.

Houston H. Doyle, Col., CAP (Ret.)
Cincinnati

Cannibalism: fact or fiction?

Dear Sir: I agree with William Arens' skepticism. Too often we "discover" what we set out to find.

During almost three decades with tribal peoples, I have been told of the derisive or disgusting behavior of those in the next valley or distant island. At times, especially after trust and friendship developed, the roles of anthropologist and subject would become reversed, as I would have related to me the habits of the white man. Expecting my confirmation, if I denied some "fact" I would be looked at in disbelief, while being assured they were *not* talking about *me*. What stories I heard in the South Pacific, from Polynesians, about American sailors!

It seems we always want to believe the worst about the "other" tribe.

Richard Sutherland
Victoria, British Columbia

Dear Sir: My grandfather, who sailed out of Rockport, Maine, around Cape Horn in the China trade in the days of "wooden ships and iron men," told me that when they hove to in the West Indies for supplies, the traders there warned them not

Ludicrous Laws.

Believe it or not, it's against the law to whistle in Maine on Sunday. Even if it is your favorite hymn.

It's tough to get clean in Florida, because it's illegal to bathe in a bathtub without wearing a bathing suit or clothing of some kind.

And an old Pennsylvania law requires cars traveling in the country at night to send up a rocket every minute, then wait ten minutes before proceeding.*

The outdated laws that regulate banking aren't so funny.

Some archaic laws are just plain silly. But others can affect you personally.

Federal banking laws are a good example. Right now, these outdated laws still prevent you from buying insurance, securities and real estate where you find most of your other financial services. Your bank.

You can buy insurance from a department store, but not from most banks. You can obtain a home mortgage from your bank, but your banker can't help negotiate a fair price for the home. You can buy securities through the mail from who-knows-who, but not on the advice of the banker you've known for years.

The future of our banking system depends on banks being able to fully compete and offer you all of the services you might want. That's only fair to you. And to us.

*Some of these inane laws may have been changed.

AMERICAN BANKERS ASSOCIATION

1120 Connecticut Avenue, N.W.
Washington, D.C. 20036

Own A Masterpiece In Miniature: COLT®

Length 6⅛"

"I am delighted to add the entire series of Colt miniatures to my own collection and recognize them for their quality, originality and beauty. They are truly jewels."
William E. Simon,
former Secretary of the Treasury

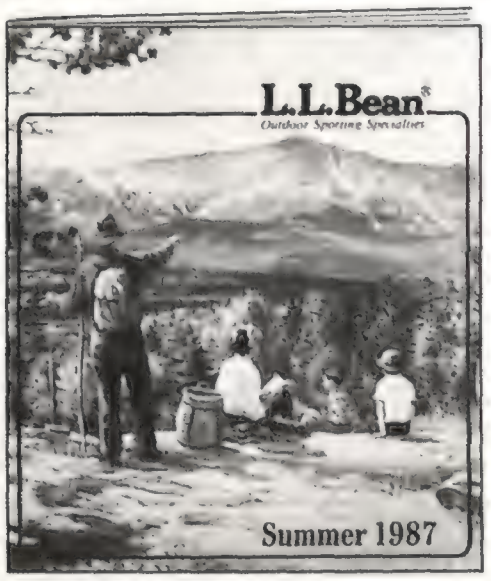
The United States Historical Society invites you to acquire this masterpiece in miniature of the '51 Navy Colt. Handcrafted and accurate in every detail, although non-firing. Available in Classic Edition, walnut grips: $525; Presidential Edition, hand engraved, mother of pearl grips; $1575. (First of the edition brought over $3000 at auction for the Metropolitan Museum of Art). The '51 Navy is first in an edition of 10 models being issued by the Society with the cooperation of Colt Industries.

Send order now or phone for free color prospectus. Major cards accepted.
☐ Please send the engraved Presidential Edition in a velvet-lined cherry case, $1575.
☐ Please send the Classic Edition in a velvet-lined walnut case, $525.
☐ I wish to receive free illustrated brochure and additional information.
Name_____
Address_____
City _____ State_____ Zip_____
For Reservations: a deposit of $200 is required for either the Presidential or Classic Editions. Balance may be paid upon delivery or in monthly installments. Satisfaction guaranteed, 30-day return privilege.
☐ Check enclosed for $_____ ☐ Charge: ____VISA ____MasterCard ____Am. Exp.
No. _____ Exp.____
Virginia residents please add 4.5% sales tax
Toll-free—1-800-446-7968
R.L. Wilson, Chairman • Antique Arms Committee
United States Historical Society • Dept. SM • First & Main Sts.
Richmond, VA 23219 • (804) 648-4736

L.L.Bean®

Outdoor Sporting Specialties

FREE Summer Catalog



Features quality products for men and women who enjoy the summer outdoors. Clothing and footwear for active outdoor use, as well as attractive, well-made weekend wear. Fully tested equipment for camping, hiking, cycling and water sports. Recreational accessories for travel, beach, backyard barbecues, and general relaxation. All guaranteed to deliver 100% satisfaction.

For 75 years, L. L. Bean has been providing practical and functional merchandise at reasonable prices. Many of our own manufacture. Order anytime, 24 hours a day, by phone or mail. Our service is reliable and efficient. **We pay all regular shipping and handling charges and offer toll-free telephone services.**

☐ **Send FREE Summer Catalog**

Name_____
Address_____
City _____
State_____ Zip _____

L. L. Bean, Inc., 1026 Casco St., Freeport, ME 04033

to go too far inland because the Indians were cannibals!

I always thought the word had a Swahili or Melanesian origin, but according to the *Oxford English Dictionary*, the word comes from the Spanish *canibales*, referring to an ethnic name of the Carib Indians in the West Indies.
Langley Upham Morang
North Miami, Florida

Dear Sir: What possible value is there in such a tasteless treatise in a magazine which seeks to offer knowledge and enrichment to our lives?
Mrs. C. E. Hiatt
Kokomo, Indiana

Dear Sir: Martin and Osa Johnson not only witnessed but actually photographed a cannibal feast on the island of Malekula in the Solomons, during an expedition made early in their marriage. The incident is related on the last few pages of Osa's book, *Bride in the Solomons.*
Ruth G. Pinkus
Ann Arbor, Michigan

Shapeful islands

Dear Sir: One does not have to go quite as far as St. Maarten to find a "culture that advocates gentle driving." Cross into Maryland and read that state's highway signs: "Please Drive Gently."
Virginia Nettleship
Chevy Chase, Maryland

Picture credits

Cover Enrico Ferorelli; 30 Clyde C.F. Roper; 38 Fred Bavendam/Peter Arnold, Inc.; 40 R.J. Erwin/Photo Researchers, Inc.; 46-51 Robert C. Lautman; 50 (bottom) © David Hockney/Gemini G.E.L., 1973; 51 (bottom) The Metropolitan Museum of Art, photograph by Arnold Newman; 52-54 Robert C. Lautman; 57 Douglas Kirkland/Sygma; 60 Joy A. Guravich; 61 DR Pollard and Associates; 62 John H. Heminway jr.; 62-69 Dan Guravich; 72, 73 Library of Congress; 74 Dane Penland; 74, 75 Library of Congress; 75-76 Dane Penland; 78 Library of Congress; 80 Library of Congress, Ohio Historical Society; 81 William and Benjamin Layton; 82 National Archives; 83 Dane Penland; 86-89 Michael Freeman; 90 Robert Graves; 92-95 Michael Freeman; 98-111 Richard G. Shaw; 114 Granger Collection, Margot Granitsas/Photo Researchers, Inc.; 115 Museum of American Folk Art; 116 National Museum of American Art, Robert M. Lightfoot III; 118 Karey Bresenhan/ *Quilts Beautiful*, The Baltimore Museum of Art: Gift of The Friends of The American Wing, Sharon Risedorph/ *Lone Stars: A Legacy of Texas Quilts, 1836-1936*; 120 Margot Granitsas/ Photo Researchers, Inc.; 121 Smithsonian Institution, Walt Matell/Boise Peace Quilt Project; 122 T. Richard Young/Quilt Festival; 124-25 Joel Breger/The Artist and the Quilt/Philip Morris Companies, Incorporated; 127 Scala/Art Resource; 128 Marsh Communications, Inc.; 129 Scala/Art Resource; 130 Photographie Bulloz; 131 *Manuel d'Épigraphie Akkadienne*, The University Museum, University of Pennsylvania; 132, 133 USGS; 133 C.C. Lamberg-Karlovsky; 134, 135 Bruno Frohlich; 138-51 Peter C. Poulides; 154-70 Chad Slattery; 188 Anacostia Neighborhood Museum; 192 Ralph Schlegel

WHEN YOU LIVE A CUTTY ABOVE.

86 Proof. The Buckingham Wine Company NY © 1987

To send a gift of Cutty Sark anywhere in the USA, where legal, dial 1-800-238-4373.

Cutty Sark.®
Uncommon Quality.

Grand Cypress • Maui • Waikiki • Grand Cayman • Orlando • Hilton Head • Scottsdale • Lake Tahoe • Monterey • Cerromar Beach • Cheju

© 1987 Hyatt Corp

As far as you

Dorado Beach • Montreux • Cancun • Acapulco • Queenstown • Rotorua • Kuala Lumpur • Macau • Kuantan • Saipan • Baguio • Fiji • Bali

Hyatt Resorts, worldwide.
It is here that fantasy meets reality.

And it is here that you will feel
as far away as you'll ever want to be.

Because at a Hyatt resort, far away
isn't a place. It's a state of mind.

want to go. Faraway Places.℠

HYATT RESORTS® WORLDWIDE

For information or reservations call your travel planner or 1 800 228 9000.

Eliminate Noise Pollution

In the constant pace of today's hectic lifestyles, you deserve the unique experience of the Marsona 1200 Sound Conditioner. Its remarkable effect on the distracting noise levels in your environment can help improve the quality of your sleep, concentration and general well-being.

Sound conditioning relates to the total sounds you hear. It protects you against unpleasant outside noises, as well as disturbing noises that occur inside your home, office, hotel, etc.

The Marsona Sound Conditioner produces low-frequency sounds to blend with or mask other sounds. It unifies and standardizes the total sound you hear so that the ups and downs are less extreme, distracting and annoying. What's more, the sound conditioner can also supply a comforting background sound under conditions that are too quiet.

The Marsona is the finest instrument of its kind available. The unit actually synthesizes nature's own natural sounds—rolling ocean surf, a spring rain and mountain waterfall.

The equipment has no moving parts to wear out. You control tone and sound. And, it consumes less power than a small night light.

Marsona Sound Conditioner is backed by a one-year limited warranty and a 30-day home trial.

ORDER TOLL FREE

Major credit card holders please call toll free. Order product #**MA120** for the Marsona 1200. Or send a check for **$129.00** (FREE Shipping & Handling). NC residents add 5% sales tax. One (1) year warranty- Thirty (30) day money back guarantee.

ORDER TOLL FREE NOW

800/438-2244

NC residents call 704/324-5222

Ambient Shapes

Ambient Shapes, Inc.

P.O. Box 5069, Hickory, NC 28603

Around the Mall and beyond

Americans visit Australia for a variety of reasons: cordiality and climate; flora and fauna; food and wine; in my own case, family connections. Smithsonian scientists are apt to come for more esoteric purposes. For example, squid.

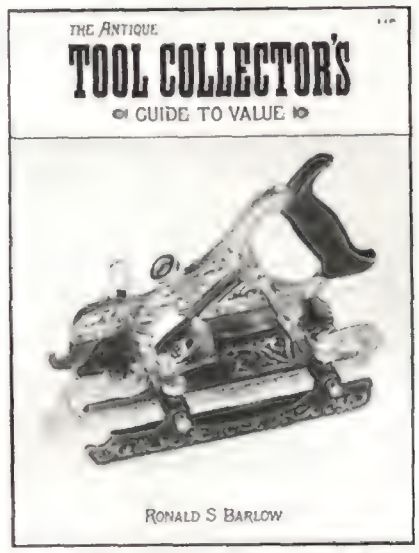
Readers of this column may remember a description of the giant squid that still lies in state at the Museum of Natural History. This huge, slimy-looking, excessively dead cephalopod, stretched out in a long white bath of alcohol, is the acquisition of my friend Smithsonian curator Dr. Clyde Roper, who winces with pain if I use the word "gross" in connection with it. "Gross" is OK to use for a giant, engorged tick, says Clyde, but not for the world's largest-known squid.

Clyde keeps coming to Australia because of squid. They are many and various down under, and not very well sorted out in biological records, so he regards Australia with the wild surmise of a spring woodchuck surveying an acre of thick clover.

Our paths crossed last March in Melbourne, where Clyde was on his fifth visit to the grand old Museum of Victoria. I met him in this classical, spacious, 19th-century building, highly reminiscent of our own Museum of Natural History: the same clamorous schoolchildren (only in school uniforms) swarming around me, stirring the same echoes in the tall galleries. Then the same Clyde Roper showed up and led me through research areas, packed with storage lockers, to a cluttered laboratory. And I realized how comfortable any old Smithsonian hand must feel in such a familiar environment.

Roper is finishing a long-term project

Please send $1°° for illustrated 1987 catalog.
141 Blackberry Inn G Weaverville, NC 28787



Antique Tool Collector's Value Guide

Just a few of the **over 5,000 items described and priced:** adzes, anvils, axes, trade catalogs, braces, bitstocks, chisels, cobbler's tools, coopers items, compasses, dividers, hammers, hatchets, knives, lathes, levels, planes, pliers, plumb bobs, routers, rules, saws, scorps, screwdrivers, shears, spoke shaves, surveying instruments, tinsmiths tools, trammel points, wrenches, and wheelwright's items. **Over 2,000 illustrations.** 1st Ed. • 230 pgs. • 9X 12 paperback • Library of Congress #84-50065.

NOW IS THE TIME to identify and price all of your old tools. Just one find could pay for this new book, many times over. Rush check or money order. $12.95 plus $1.05 postage.

WINDMILL PUBLISHING

2147 Windmill View Rd., Dept S – El Cajon, Calif 92020

Antarctica, Australia & New Zealand, Galapagos Islands, Kenya & Tanzania

Places you have always wanted to visit

Princeton Nature Tours • 282 Western Way
Princeton, NJ 08540 • 609-683-1111

TREEHOUSES
And other redwood play sets. Call or write for a free color brochure.

WOODPLAY®

Building Play Value for 10 Years

Dept. SM5, P.O. Box 27904, Raleigh, NC 27611
(919) 832-2970

The Hamilton Watch Company announces the return of a great classic.

THE WILSHIRE

City Edition

Hamilton has been producing fine watches in Lancaster, Pennsylvania for over 90 years. Our "Wilshire" model, first introduced in 1939, became an instant success. Its bold shape, delicate design and superb detailing were instantly prized by all who saw it. Well known for more than a decade, the original Wilshire is widely sought after and nearly impossible to find.

Today Hamilton proudly revives the Wilshire City Edition. It is your opportunity to acquire a magnificently crafted watch, one that vividly recaptures a classic style of decades ago.

A FORTIES' REVIVAL

The Wilshire City Edition introduces one significant improvement over the original watch—a precisely accurate Swiss quartz movement, sure to provide many decades of outstanding performance.

The elegantly rounded case is fitted with curved swinging hinges to conform comfortably to your wrist.

The white face and "Paris Antique" numerals are bordered by a distinctive closed minute track. The men's model includes a separate second dial at 6 o'clock.

The Hamilton ladies' model has been created in the style of the original Wilshire, as a companion to the men's watch. The back of either watch can be monogrammed with three initials of your choice.

Hamilton is offering this special registered edition of the Wilshire City Edition for $295 each.

THE HAMILTON GUARANTEE

Since its founding in 1892, Hamilton has maintained a lasting standard for excellence in design and technology. If for any reason you are not pleased with your watch, you may return it within fifteen days, in the condition in which it was sold, for a full refund.

To order your Wilshire City Edition, simply fill out the coupon below and send it to the Hamilton Watch Company, P.O. Box 7343, Lancaster, PA 17604.

Or call **TOLL-FREE 800-233-0281,** or in **PA 717-394-7161, ext. 2275.**

The Hamilton Watch Company
Dept. 482, P.O. Box 7343
Lancaster, PA 17604

Charge Your Order: Call Toll-Free 800-233-0281
(In Pennsylvania call 717-394-7161, ext. 2275)

Please send my Wilshire City Edition watch. I understand that the $295 price includes shipping and handling. PA residents add 6% sales tax. Engrave these three initials on the back:

QTY. ___ Mens ☐ ☐ ☐ ___ Ladies ☐ ☐ ☐

Name _____

Address _____

City _____ State _____ Zip _____ Telephone ( ) _____

☐ Payment enclosed. Charge my: ☐ Diners Club ☐ MasterCard ☐ VISA ☐ American Express

ACCT: # _____

Interbank # (MC only) _____ Exp. Date _____

Signature _____

Allow 4–6 weeks for delivery.

that he has been carrying out with Dr. C. C. Lu, curator of the Museum of Victoria's invertebrate zoology department and, in Clyde's words, "Australia's first true cephalopod man." Together, they've been investigating the skin structure of squid. They had their research almost cleaned up in 1980, and then Clyde was made chairman of invertebrate zoology at the Smithsonian, and for five years administrative duties interrupted the project. Determined to get on with it, he arrived in Melbourne again early this year, only to be swept away on a fascinating digression—a study of the blue-ringed octopus.

If the name rings a bell, it's because this little sea creature has been in the news. It's killed a couple of people. Its bite carries a neurotoxin similar to a cobra's, which, says Clyde, affects the muscles leading to the heart and respiratory system. The little octopus has gained notoriety simply because more and more people are visiting Australia's coastal resorts and being warned about it.

Roper showed me some photographs

H. fasciata, a species of blue-ringed octopus, has lines instead of rings on its body. About six inches from armtip to armtip, it gives off a deadly toxin.

of a rather handsome octopus with nondescript spots. "The spots turn bright blue when the critter's aroused," he explained. "If it bites, you don't feel it. You get numb. Then you find it hard to talk. Then paralysis sets in, but you remain conscious. Then you have respiratory failure, and about two hours after the bite . . . zingo."

"No antitoxin?" I asked.

"Not yet. But," he added defensively, "the little thing's not aggressive. It only bites you if you squeeze it."

He told of a woman who, wading in shallow water to collect shells and small animals, picked up a blue-ring and slipped it into the bra of her bathing suit. "That wasn't at all the right way to handle it," he said. He didn't go on to say whether it was zingo with her. He just shook his head sadly.

"We had a blue-ring as a pet right here in the lab," he said. "We got it in two feet of water on one of the pilings of a public pier just down Port Phillip Bay from Melbourne."

I looked around uneasily.

Starting today,
one dog in fifty will eat
like never before.

"Oh, it's gone," Clyde reassured me. "It seems to have taken a walk. Maybe it got down a storm drain."

Octopuses, it turns out, are great escape artists. Their plastic, boneless form lends itself to contortion, allowing them to squeeze through openings much smaller than their bodies. In fact, they are often able to slip out of all but the most tightly sealed aquariums. The rule of thumb (or in this case, eye) is that octopuses can get out of any opening as large or larger than the distance between their eyes.

I could almost visualize the lab's pet blue-ring at the moment of its great escape—contorted, compressed, molding itself into the shape of some crevice or drain. My mind whirled with possibilities. I wondered whether the toilets of Melbourne might soon prove to be an interesting lottery.

"The point is," Clyde continued, "we want to work out the systematics of this little fellow. There have been only two species listed, but we know of at least five." He ticked them off: "The small-ringed, *Hapalochlaena maculosa*, seems to be different in Western Australia from down here in the southern part of the continent. Then there's the large-ringed, *H. lunulata*, up on the north coast, and another, *H. fasciata*, that has lines instead of rings on its body. That seems to be found only in New South Wales. We know of another up north in the islands of Vanuatu."

Clyde has been searching out the blue-rings, looking under rocks that lie on sandy or muddy stretches of bottom where algae are plentiful. The more collected, the more learned. And because of the storm of publicity surrounding the blue-ring, all species of octopus are suffering. "People kill them without thinking twice about it," he said. "We've had groups watching us who back away when they see what we're catching. They call out, 'That's an ocky! It'll kill you!' And they hurry off. People are really scared of them."

So Clyde learns all he can before it's too late. But his primary purpose for being in Australia remains to study, with Dr. Lu, the tiny structures, which they call tubercles, that roughen the surface of the mantles, or outer coverings, of several families of squid. Are they scales of some sort? What are they made of? What function do they fill?

Seated at his lab bench, Roper slipped one slide after another under the microscope lenses, exclaimed with delight at the beauty revealed, made me look, too, fussed over the focus, explained what I was seeing and pointed out possible reasons for the strange images that appeared. First, he produced a small, pickled squid so that I could run a finger across its mantle. Rough as sandpaper. Then he held the edge of the mantle under a low-power microscope, and I found myself looking at a miniature mountain range—little peaks and valleys thickly clustered on the plain of the skin.

"Now look at this," he said, moving back to the big microscope and focusing a new slide. "There . . . got it . . . beautiful! See the clear structure? That's cartilage, the 'glassy' kind that invertebrates

Will it be yours?

Of the 50 million dogs in America, a million will now enjoy a dry dog food never before available.

A dog food for the fortunate one dog in fifty.

Will it be yours?

That depends on the price you place on quality. Because quality is what our new dog food is all about.

We named our dog food Purina O.N.E.® Short for "Optimum Nutritional Effectiveness."

"Optimum" because, ounce for ounce, there is no leading dog food that is more nutritious than Purina O.N.E.

We used a number of expensive ingredients not used in most other dry dog foods.

Our main ingredient is chicken—a highly digestible source of protein and other nutrients for dogs.

And there's no fillers, or artificial colors or flavors.

Purina O.N.E. tastes great, too. Tests prove it's more palatable than even the leading dry dog food.

Unhappily, not all dogs will get the chance to eat Purina O.N.E.

Because not every dog owner is willing to pay the price for a dog food of this quality.

Pick up a bag of Purina O.N.E. and compare its ingredients to the dog food you're now serving.

Then compare the price.

And decide if your dog is worth the difference.

Helping pets live longer, healthier lives

Purina

© Ralston Purina Company, 1987

have. It's always been assumed that the rough growth you just saw was cartilage. Right?"

"Right," I said, cooperatively.

"Now . . . wait a sec . . . there you go . . . oh, wow! . . . Here are the protuberances we call tubercles. See the differences? See those muffin shapes? And see the muscle fibers—the patches dyed red? Anyone can see that's not cartilage."

"You bet," I agreed.

"And look at this little beauty. . . . No, that's not it . . . here. . . . What a great slide! See the small ends of the muffins all pointing in the same direction? That's the direction of the flow. That's why they were always called scales and just left at that. But you see each example is quite different."

"It is, it is," I said, feeling like the kid in *Mr. Wizard*.

"Now look at this one. God, that's gorgeous! You've got connective tissue indicated in blue . . . "

"And muscle fibers in red," I put in, with pride.

He beamed at me. "And this was thought to be related to the muffin type, but it's not at all like it. So we have another clue to the systematics."

"What happens between the protrusions?" I asked.

Again he beamed, for this was the question he wanted. I foresaw the possibility of an A for the semester.

"They hold a body fluid, lightweight ions, to give the animal buoyancy. But the protrusions themselves we think serve to reduce drag."

It sounds paradoxical: a rough surface reducing water friction. But Clyde reminded me that a smooth surface passing through a fluid produces whorls—vortices—which slow it down. That's why the laminar flow wings of many high-performance aircraft have small interruptions—sometimes parallel ridges on the surface, sometimes little winglets rising from the wingtips—to destroy the vortices and improve the speed. "We think," said Clyde Roper, "that the rough surface of a squid's mantle—caused by those tubercles or muffins or scales or whatever you want to call them—may possibly serve to break up the vortices around the mantle. After all, a shark has a rough surface; dolphins have ridges . . . "

"And what about 12-meter sloops?" I asked, since at this time the loss of the America's Cup was still rankling in Australia.

Again it was the right question, for Clyde worked for seven years lobstering in New England, and he knows boats. He speared me with a triumphant finger. "Dennis Conner treated *Stars & Stripes* with a rough, grooved finish," he said. "The idea was to give him more speed by reducing vortex drag. He went like hell. So do squid. Maybe they both know something."

That's the way a Smithsonian scientist talks when he's not writing a formal report, when he's sharing his enthusiasm with a friend. Maybe being on the other side of the world had something to do with the special excitement and extra zest that Clyde showed me. I only know I was lucky to be in faraway Melbourne at a good moment.

Edwards Park

TAKE THE SCENIC ROUTE THROUGH EUROPE AND SAVE MONEY IN TRANSIT.

Alpine roads, ancient castles, unsullied countryside–see Europe this year as you never have before: behind the wheel of your own Mercedes-Benz. Order the model of your choice.* Take delivery in Stuttgart. And then embark on the driving adventure of your life. Meanwhile, as you roam the Continent, you'll be saving money en route–on trains, planes, and rental car costs. Think it over. Buying a Mercedes-Benz in Europe could prove to be a very shrewd indulgence. Send coupon at right for our free color brochure.

*subject to availability

Send coupon to:
Mercedes-Benz of
North America, Inc.,
Marketing Communications
Division,
One Mercedes Drive,
Montvale, NJ 07645

Name_____
Address_____
City_____
State_____ Zip_____

© 1987 Mercedes-Benz of N.A., Inc., Montvale, NJ
SMY87

The National Wildlife Federation announces its Official First Day Cover Collection of the

Wildlife of the 50 States

Beautifully designed First Editions of the most important set of wildlife stamps *ever* issued by the United States.

America the Beautiful. Yesterday. Today. And tomorrow. With that vision *half a century ago,* the National Wildlife Federation, inaugurated its famous series of annual Wildlife Conservation Stamps.

Today, they are an American tradition, sought after by collectors young and old. And admired for the important part they have played on behalf of America's priceless natural legacy. Yet, none of them have been *postage* stamps.

Now, at last, to reflect the spirit of this tradition as its 50th year approaches, the United States will issue *The Wildlife of the 50 States: Fifty* remarkable *postage stamps*. Each identified with one of the states.

First Editions not generally available

Stamps of *The Wildlife of the 50 States* will be sought after by philatelists, and legions of conservationists and devotees of wildlife art. Of course, all the stamps will someday be available at Post Offices across the Nation.

But, obtaining *First Editions* of the stamps is a different matter. Comparatively few complete collections of the coveted *Official First Day Covers* — bearing the special "First Day of Issue" postmark applied by the U.S. Postal Service — will be available. And, then, only to those who have made special arrangements.

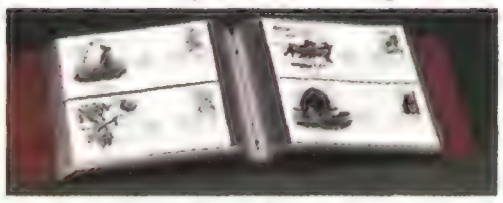
These stamps will first be issued on June 13, 1987, at the year's *major* international philatelic exhibition in Toronto, Canada. Thus, the *first editions* will be certified by the postmark of a special, temporary U.S. Post Office *outside* the country — itself a rare and interesting event. Only on June 14th will the stamps be available at Post Offices across the United States.

Today, *you* can place an advance reservation for the *Official First Day Cover Collection* authorized by the National Wildlife Federation itself. For your own enjoyment. And for wildlife conservation. For, a portion of the proceeds of these collections will support the far-reaching work of the Federation.

Beautiful original works of wildlife art

Significantly, each First Day Cover will bear a matching *original work of art* created for this collection by the American artist Don Balke. As marvelous as the stamps themselves, Balke's paintings are expressive and richly detailed — from California's agile Sea Lion and New York's industrious Beaver . . . to the majestic symbol of the Nation itself, the Bald Eagle.

Each collection will also be authenticated by Federation experts and includes — at no additional charge — a deluxe album. The reverse of each Cover contains authoritative information and shows the range of each species. An accompanying Certificate attests to the collection's limited edition status.



Although this collection presents the rich panorama of America's wildlife as never before, the *inclusive* original issue price is only $2.79 per First Day Cover. There are no additional charges. A $10 deposit reserves the complete collection, with the balance payable in seven monthly installments of just $18.50. All payments can be made by credit card. *Your money will be promptly refunded if you are not completely satisfied.*

Advance Subscription Deadline: June 13, 1987

Today, do take advantage of your opportunity to acquire *The Wildlife of the 50 States* First Day Cover Collection. Remember, acceptance of orders can be guaranteed *only* if received by the First Day of Issue, June 13, 1987. Shipment will be made seven to ten weeks after the First Day of Issue.

Mail or telephone your order today for this important collection to Fleetwood, which has been appointed by the National Wildlife Federation to produce the collections and to process and fulfill all orders. The address is: Fleetwood, One Unicover Center, Cheyenne, Wyoming 82008. (Telephone Toll Free 1-800-443-3232.)

©1987 NWF

Each cachet is an original work by renowned wildlife artist Don Balke.

The distinctive Postmark certifies the *first edition* of the stamps and the international significance of the First Day of Issue.

Each of America's fifty postage stamps was designed by wildlife artist Chuck Ripper.

Covers shown smaller than actual size of 6½ by 3⅝ inches (165mm by 92mm). Stamps and postmarks are artist's concepts.

RESERVATION FORM

Official First Day Cover Collection of the

Wildlife of the 50 States

Advance Subscription Deadline: June 13, 1987

National Wildlife Federation
c/o Fleetwood
One Unicover Center
Cheyenne, Wyoming 82008-0001

Please accept my reservation for _____ Official First Day Cover Collections of the *Wildlife of the 50 States* at $2.79 inclusive per First Day Cover, including deluxe album. For each collection, I will pay a $10 deposit now and the balance in seven monthly installments of $18.50.

I prefer to pay:

☐ **Directly.** My check for $_____ is enclosed. Bill me the balance.

☐ **By Credit Card.** Bill $10 per collection and the balance in installments as due to my account:

☐ MasterCard ☐ Visa ☐ Diners Club ☐ American Express

Card Number _____ Exp. _____

Signature _____
All Orders MUST be Signed.

Mr./Mrs./Miss/Ms. _____
PLEASE PRINT
All Applications are Subject to Acceptance.

Address _____

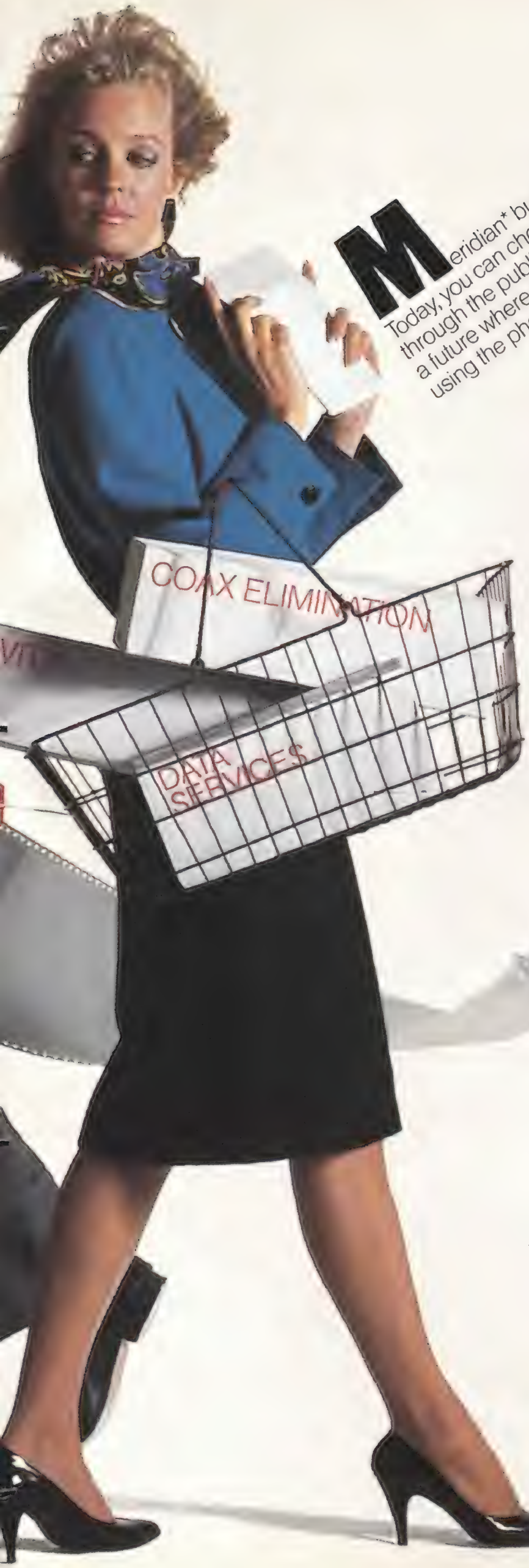
City _____

State _____ Zip Code _____

National Wildlife Federation, Washington, D.C., is America's largest conservation organization. Fleetwood, America's foremost First Day Cover producer, is a division of Unicover Corporation. Not affiliated with the U.S. Postal Service.

54CA-C201

*Trade mark of Northern Telecom © 1986 Northern Telecom



Meridian* business services add more to Centrex. Today, you can choose from a whole supermarket of data services through the public telephone network. Act now and be ready for a future where sharing data, text and image will be as easy as using the phone.

nt northern telecom

meridian

NETWORKING

Who Will Paint Your Portrait?

We represent today's foremost portrait painters and sculptors. Visit our exhibition gallery and commission the artist of your choice or send $1 for our new color brochure.

PORTRAITS, INC.

985 Park Avenue, New York 10028
(212) 879-5560
Portrait Center of America, since 1942

4' Chippendale II
Made in England

Country Casual

SOLID TEAKWOOD
BENCHES • SWINGS • PLANTERS
colour catalog $2.00
COUNTRY CASUAL -SM
17317 Germantown Road
Germantown, MD 20874-2999
(301) 540-0040
The Garden and Leisure Furniture Specialists

WORLD'S LARGEST INVENTORY!

Discontinued China & Crystal

We carry all major brands of bone china, earthenware and crystal. Complete your treasured settings. Write or call about your patterns today.

- VISA or MasterCard accepted.
- We BUY and SELL — Call (919) 668-2064

REPLACEMENTS, LTD
302 Gallimore Dairy Road Dept. SM5 Greensboro, NC 27409-9723

Scientific Study Ranks NordicTrack #1

Bill Koch
8 time Nat'l X-C Ski Champion
Olympic Silver Medalist
World Cup Winner

NordicTrack Pro With Adjustable Elevation

© PSI 1986

In tests of exercise efficiency at a major university, NordicTrack burned more calories and provided greater aerobic workouts.

Rank of Efficiency

1. NordicTrack X-C Ski Exerciser
2. An Exercise Bike
3. A Rowing Machine
4. A Shuffle-Type Ski Exerciser

Scientific Abstract available upon request.

NordicTrack's higher oxygen usage test scores show that more muscle mass is involved in the exercise and more calories are being burned.

It's Only Logical that NordicTrack Would Get the Highest Scores.

NordicTrack is More Complete Than an Exercise Bike

NordicTrack adds important upper body exercise and more uniform leg muscle usage.

Cross Country Skiing Is More Efficient Than Rowing

NordicTrack's standing position exercises the lower body muscles more uniformly. NordicTrack's arm resistance is separately adjustable—allows a more ideally proportioned exercise. Rowing machines use only one resistance setting for both arms and legs.

Burns Up To 600 Calories per 20 Minute Workout

For effective weight control.

NordicTrack has Inertial Resistance Not Available on a Shuffle-Type Ski Exerciser.

Other ski exercisers use less effective frictional resistance with a resulting calisthenics-like feeling. NordicTrack's unique flywheel provides more effective inertial resistance for a life-like feeling of smoothness and continuity matched only by real skiing.

Free Brochure, and New Video!

800-328-5888
Minnesota 612-448-6987

NordicTrack

NordicTrack 141 H Jonathan Blvd. N. • Chaska, MN 55318

Phenomena, comment and notes

As Americans start to eat fish that once were thrown back, things look good for the men who go to sea to catch them

For a while I kept a "good news" folder, a place for stories of little guys winning, tales in which reason or virtue somehow triumphed. The first clipping concerned British drinkers who forced a brewery to give up a new, faster process that produced an ale "almost as good" as the old. My idea was that, once I got into a routine, I would write up all the good news every two weeks for a newsletter that people would buy because it would brighten their day. But days and weeks went by without any new clippings, and finally I threw the file away.

Good news does pop up from time to time, though. The latest as I write is a long story from the *New York Times* Sunday business section in early March. The gist of it is that Americans are eating more fish and more kinds of fish than ever before. We spend more money on fish than we do on chicken. Per capita consumption has risen from 10.9 pounds in 1966 to 14.5 pounds in 1985 (not counting, of course, what several million recreational fishermen bring home to the kitchen). Sales are rising so fast—more than ten percent a year in some supermarket chains—that industry analysts are predicting 30 pounds a year by 1990. That's still a long way from chicken, at 59.5 pounds, and beef, which has been falling for years but still leads at 79. But it is hope for a troubled industry.

Increasing demand, and especially demand for more kinds of fish, has got to be good news for a group of men I admire perhaps more than any other, commercial fishermen. They are part of our

Ours concentrate on the things that count. Like comfort, and color, and better cotton fabrics.

As evidence, consider the Cotton Mesh Knit Shirt pictured. It's our pride and joy, something we've spent years testing and improving and, finally, perfecting.

The fabric is a specially constructed 100% combed cotton mesh that is hefty and full-bodied. Unusual these days, when so many mesh knits are edging in the direction of flimsy.

And it shrinks less. Even less than some of the poly/cottons we tested! You know what a blessing that can be. Remember when you bought that snappy designer knit, and had to hand it over to your diminutive son or daughter after just one washing? That won't happen with our shirt.

Fine features, and a surprising price.

We put as much thought into features as we do fabric. You'll appreciate the strong, smooth taping in the collar and shoulder seams. Extra-long tennis tails that stay in. Cross-stitched buttons that stay on. The same generous cut you'll find in all Lands' End garments. And much more.

The price for all this quality? Just $15. Frankly, we don't know why a good mesh knit shirt should cost more. But most of them do. And don't even come in as many colors as ours (seventeen).

Mesh isn't your only option.

If mesh knits aren't your style, we give you plenty of other choices. For a closer look at our lisles, rugbys and other assorted knits, send for our free catalog. Or call us toll-free, anytime of the day or night, at 1-800-356-4444.

You may even want to order a $15 Mesh Knit Shirt right now (we encourage that kind of impulsive behavior). You'll run no risk, because we back everything we sell with America's shortest, sweetest guarantee: GUARANTEED. PERIOD.

Please send free catalog.
Lands' End Dept. B-38
Dodgeville, WI 53595

Name _____

Address _____

City _____

State _____ Zip _____

Or call toll-free: 1-800-356-4444

LANDS' END
DIRECT MERCHANTS

A goosefish in the water but a monkfish in the kitchen, this handsome creature eats anything. Luckily its taste isn't skin deep.

culture. Europeans have been fishing off New England since the early 1500s (and possibly before Columbus, but that's another story). Like my mother before me, I spent a lot of childhood summers in Gloucester, Massachusetts, the town on Cape Ann that by 1923 had lost 10,000 fishermen at sea. I grew up on Longfellow's ballad "The Wreck of the Hesperus," in which a Gloucester schooner is caught in a winter storm. The captain has lashed his daughter to the mast; he himself is a frozen corpse at the helm: "And fast through the midnight dark and drear,/ Through the whistling sleet and snow,/ Like a sheeted ghost, the vessel swept / Tow'rds the reef of Norman's Woe. . . ."

As a youngster in the early 1940s, I met Howard Blackburn, a dory fisherman who was separated from his schooner in a storm and rowed to Ireland—in the middle of winter. They had to cut his hands from the oars.

From the breakwater at Eastern Point Lighthouse, or from the rowboat in the harbor where I was fishing for flounder, I would watch the draggers heading out to George's Bank or returning after a week or ten days at sea, their single-cylinder diesel engines chuffing in clouds of gulls. These were "eastern rig" draggers with the wheelhouse aft, the working deck forward of that, and tremendous high, curved bows. Decades later I would drag my children down to wharves in Massachusetts and try to explain what made a boat seaworthy. In all these years I've never made a trip on a fishing boat, but some very good writers have (SMITHSONIAN, May 1985).

Times have been bad for American fishermen for a long time. Canadian vessels are unloading blocks of frozen fish

Give us two weeks and

on the piers of Gloucester and Boston (the Canadians are subsidized and won the rights to the richest part of George's Bank in a recent World Court decision). Pacific boats deliver their catch to foreign factory ships, where they are processed and frozen on the spot. The United States is importing 60 to 70 percent of the fish we eat, more than $6 billion worth.

Thus the *Times* story was a light in the darkness. If Americans are eating more fish and more kinds of fish, it has to mean a better day for fishermen. When the crew of a dragger dumps the net out on deck, they can keep—and sell—species they once would have thrown back over the side because no one would buy them. Apparently Americans are developing a taste for sea robins (p. 40), bony-headed fish with vicious spines in their dorsal and pectoral fins that are the despair of hook-and-line fishermen. Not only is mako shark selling, sometimes for more than swordfish, but so is the small shark we all know as dogfish. The trick: market it as "salmon shark" or "grayfish." Blowfish, relatives of the fugu so prized by the Japanese, sell in restaurants as "sea squab."

My favorite, both as a success story and on the menu, is monkfish, a bottom-dwelling anglerfish that no one has ever called pretty (opposite). The French, who call it *lotte*, have prized it for years, but a generation ago it was a trash fish for U.S. boats. Today it goes for $3.50 a pound dockside, and dealers will take all they can get. Only the tail is eaten, but the meat has a marvelous quality. The Gloucester Fishermen Wives Association (now there's a group that knows a thing or two about cooking fish) advises that monkfish can be substituted for lobster in stews, salads and the like.

More on the way. A Boston fish dealer has come up with a way to shave the tough skin off the wings of skates, raylike bottom feeders known best to beach walkers by their rectangular, beribboned egg purses that wash up with the tide. The meat is supposed to be delicious: "sea scallops" are sometimes rounds punched out of skate wings with cookie cutters, a testament to the latter's delicate flavor.

Then there is the ocean pout, a fish that looks like a short, fat eel. Even the name is new to me, but Madeleine Hall-Arber of the MIT Sea Grant Program says it came in first in a fishery cook-off between Massachusetts and South Carolina. The fish is plentiful; the trick is to let people know it tastes good. *The Audubon Society Field Guide to North American Fishes, Whales & Dolphins* says, "Though there is little demand for them as food, the flesh of Ocean Pouts is reputedly lean and wholesome." Farther down the road, perhaps, are sea urchins, already a hit at the annual Massachusetts seafood festival. So far, says Hall-Arber, they are sold to sushi bars and "white-tablecloth" restaurants; the rest of the catch then goes on to Europe.

In the Pacific, a fish that could substitute for flounder or haddock now goes for four to six cents a pound as a constituent of surimi, fish that is processed and blended with things like egg white and wheat so the end result tastes something like shrimp or crab. (Such things can go too far: I have a recipe for ersatz crabmeat salad that depends heavily on grated Swiss cheese, with pimentos for color.) The fish in question is the Alaskan pollock, a white-meat variety whose numbers are measured in the millions of tons. The National Marine Fisheries Service (NMFS) hopes it will become a

we'll give you the world.

Bahamian registry

Your two week vacation can take you a lot further than you ever dreamed. Wherever your dreams take you, we take you with air fare included from selected gateways. Plus a free stay in choice international cities. There's nothing more to arrange—except your two weeks off!

AUSTRALIA/NEW ZEALAND (Winter). G'day, everyday! $3,429-$11,831

CHINA IN DEPTH (Fall & Spring). See it all! $4,136-$12,375

JEWELS OF THE ORIENT (Fall). Bali, Bangkok & beyond. $3,777-$10,413

RIO SAMBA! (Fall & Spring). West Indies & Brazil. $3,024-$12,718

PANAMA CANAL (Year 'round). The Caribbean & Mexico. $2,697-$10,197

ROYAL VIKING LINE **800-862-1133 (Georgia: 404-237-3526).**
Contact your travel agent today! Call for a brochure. Or write Royal Viking Line, 750 Battery St., San Francisco, CA 94111. *Air or land package credits available.*

Name *Phone*

Address

City/State/Zip

Past cruises: ☐ None ☐ Royal Viking Line ☐ Other 7MYYSS0501
Preferred Vacation Length: ☐ 7-10 days ☐ 11-14 days ☐ Longer
Foreign Travel: ☐ Europe ☐ Orient/South Pacific ☐ Mexico ☐ Caribbean ☐ None
Age: ☐ 25-44 ☐ 45-64 ☐ 65+

Royal Viking

The best of all worlds all over the world.

There are 31 Dukes in Great Britain.
But only 12 "Leading Hotels."

Here's where to find them.

Around the world, 210 hotels provide the service, decor, cuisine and attention to detail which qualify them as 'Leading Hotels of the World'. Send $2.00 for our worldwide directory. For reservations, telephone 1-800-223-6800; from NY State and Alaska, 212-838-3110 collect. Or see your travel consultant.

Name_____Address_____

City_____State_____Zip_____

Write to: The Leading Hotels of the World, 747 Third Avenue, New York, NY 10017-2847

The Leading Hotels of the World®

First Investors,
a most honourable high
yield fund, hath paid
a dividend every month
since 1973. It doth give
ease to my thoughts.

**Think First.
Then invest.**

© 1987 First Investors Corporation

**First Investors
Fund For Income**

First Investors

For more complete information about First Investors Fund For Income, Inc., including charges and expenses, call **1-800/237-3500** to receive a prospectus. Read it carefully before you invest.

If you prefer, you may write for information:
First Investors Corporation, 120 Wall Street, New York, NY 10005

table fish in the United States rather than a raw material for Japanese processors.

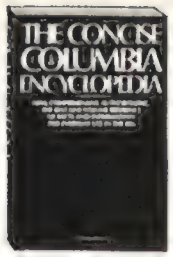
We export almost all the squid we catch as well, except for the little that is prized as calamari in Mediterranean restaurants. But with squid our fishermen are moving up the ladder. In 1987 there will be no foreign allocation for squid caught within the 200-mile limit; Americans will catch it, process it, then send it off to Spain and Japan. Seafood companies are trying to enlarge the U.S. market, starting with deep-fried squid rings.

Fish is never going to surpass beef. For one thing, it takes an additional 700 million pounds of undressed fish to raise the per capita consumption by one pound, and the sea is no more an unlimited resource than any other (SMITHSONIAN, June 1974). For another, as an NMFS spokesman points out, more than half the fish we eat is imported; higher consumption means more imports, increasing our already serious trade deficit.

We are working up a taste for fish far beyond tuna sandwiches, however. One seafood marketing journal reports a "feeding frenzy" among "upscale customers" for shark. Part of the reason is health awareness. Medical researchers, fascinated with the low incidence of heart trouble among the Inuit, are finding that fish oil may retard—and even reverse—coronary heart disease. A study published last fall in the *New England Journal of Medicine* sounds almost too good to be true. A team of 13 researchers experimented on a total of 18 pigs, animals in which coronary atherosclerosis is similar to that in humans. The pigs were fed a high-fat diet for eight months so their blood levels of cholesterol and triglyceride were very high. While on this high-lipid diet, seven of the 18 test animals were given cod-liver oil: these showed

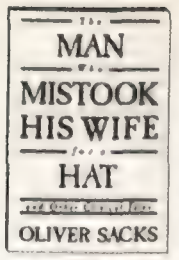
A sea robin may object to its growing popularity, but diners and fishermen don't.

3 BOOKS, 3 BUCKS.

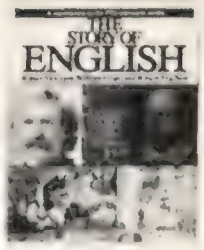


218
Hardcover: $29.95
QPB: $13.50

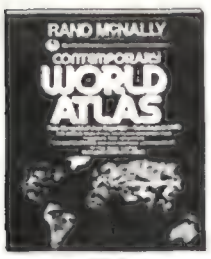
414
QPB: $8.95



757
Hardcover: $16.95
QPB: $7.95



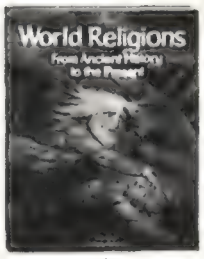
*721
Hardcover: $24.95
QPB: $12.95



733
Hardcover: $14.95
QPB: $8.95

*751
Hardcover: $18.95
QPB: $8.95

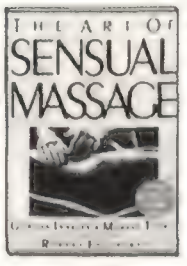
192
QPB: $9.95



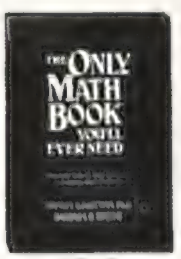
601
Hardcover: $29.95
QPB: $11.95

128
Hardcover: $18.95
QPB: $7.95

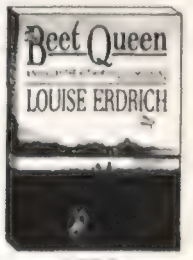
THOMAS JEFFERSON



297
QPB: $9.50

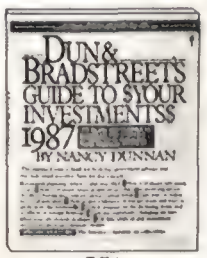


*739
Hardcover: $17.95
QPB: $8.95



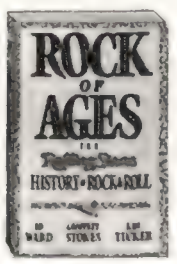
*778
Hardcover: $16.95
QPB: $8.95

306
Hardcover: $11.95
QPB: $6.50



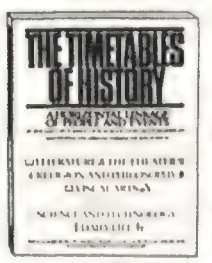
771
QPB: $8.95

775
Hardcover: $29.95
QPB: $11.95

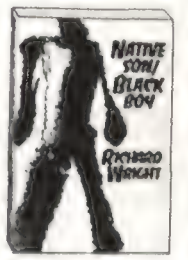


752
Hardcover: $24.95
QPB: $12.50

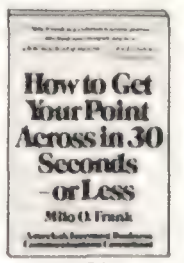
*108
Hardcover: $21.95
QPB: $11.50



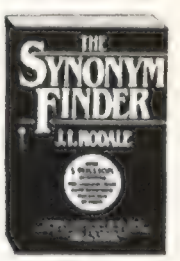
267
Hardcover: $29.95
QPB: $12.95



*227
QPB: $9.95



*353
Hardcover: $14.95
QPB: $7.95



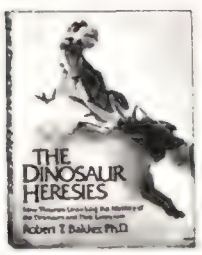
523
QPB: $10.95

NO COMMITMENT.

NO KIDDING.

*A QPB Exclusive.
The only softcover edition now available.

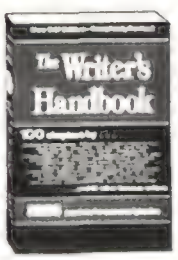
347
Hardcover: $22.50
QPB: $14.50



*777
Hardcover: $19.95
QPB: $9.95

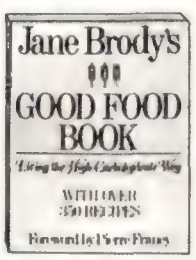
767
QPB: $9.95

PROUST



*755
Hardcover: $25.95
QPB: $12.95

672
Hardcover: $16.95
QPB: $8.95



439
Hardcover: $22.95
QPB: $11.50

597
Hardcovers: $39.90
QPB: $16.50

Big Savings: QPB books are softcover books in hardcover sizes, durably bound and printed on fine paper. But they are priced up to 60% less than their hardcover counterparts.

QPB Review: You'll receive the *QPB Review* 15 times a year (about every 3½ weeks). Each issue reviews a new Selection, plus scores of other books. If you want the Selection do nothing. It will be shipped to you automatically. If you want one or more of the other books—or no book at all—indicate your decision on the Reply Form always enclosed and return it by the date specified.

Return privilege: If the *QPB Review* is delayed and you receive the Selection without having had 10 days to notify us, you may return it for credit at our expense.

Bonus books for Bonus Points: For each softcover book or set you take (except for the books in this offer), you earn Bonus Points which entitle you to choose any of our softcover books. You pay only shipping and handling charges.

Cancellations: You may cancel membership at any time by notifying QPB. We may cancel your membership if you elect not to buy and pay for at least one book in any six-month period.

QUALITY PAPERBACK BOOK CLUB

Let's Try Each Other For 6 Months.

Quality Paperback Book Club,® P.O. Box 8804 Camp Hill, PA 17011-8804

COLETTE

Please enroll me in QPB and send the 3 choices I've listed below, billing me only $1 each, plus shipping and handling charges. I understand that I am not required to buy another book. You will send me the *QPB Review* (if my account is in good standing) for six months. If I have not bought and paid for at least one book in any six-month period, you may cancel my membership. A shipping and handling charge is added to each shipment.

Indicate by number your 3 choices. [ ] [ ] [ ]

7-16

Name _____
(Please print clearly)

QB454-5

Address _____ Apt. _____

City _____ State _____ Zip _____

Prices generally higher in Canada. ©1987 Quality Paperback Book Club. All orders subject to approval.

What do you give the person whose generosity, intelligence, and special sense of humor have forever earned a place in your heart?

Memorable gifts for men and women. Shown, our 10 karat gold filled Selectip® Pen with rolling ball refill, $42.50. Porous point refills also available. Other models and finishes from $11.50 to $1,000.

CROSS®
SINCE 1846

Unquestionably guaranteed against mechanical failure, regardless of age.

"a marked reduction in the extent of coronary atherosclerosis in swine, despite the continued dietary intake of large amounts of saturated fats."

The pigs weighed about 100 pounds at the end of the study, and were given six teaspoons of cod-liver oil a day. That much also contains several times the recommended daily dose (for humans) of Vitamins A and D, which can be toxic. Drug companies are scrambling to market purified preparations of omega-3 fatty acids, the active substances in cod-liver oil. But I'm reverting to childhood. In addition to all the fish I've been eating lately, I'm taking a teaspoon of cod-liver oil every day. (It's personal idiosyncrasy No. 712 that I like the stuff.)

Additional studies have been performed on monkeys and on humans, and initial results indicate that some types of fish oil do lower cholesterol and triglyceride levels in the blood. In a few cases, though, human volunteers who took large doses of salmon oil had increased blood levels of one form of cholesterol. So it's probably a better idea to get your omega-3s with a fork rather than a spoon.

Most people don't eat fish for their omega-3 fatty acids, though. There's something fresh and clean about a creature that lives in cold salt water, feeding on crustaceans and smaller fish. As we eat, we can incorporate a little bit of the sea. So when a writer comes by for lunch, I go for the monkfish—and wait for ocean pout and Alaska pollock to appear on the menu. At the supermarket I watch for croaker and pick up the mussels from Tenants Harbor, Maine. And sometimes, sitting at my desk in the morning or going to bed at night, especially when it's windy and rainy and nasty outside, I think of the men at sea on draggers and stern trawlers, long-liners and purse seiners, still putting food on the table the hard way, the last hunter-gatherers of our society.

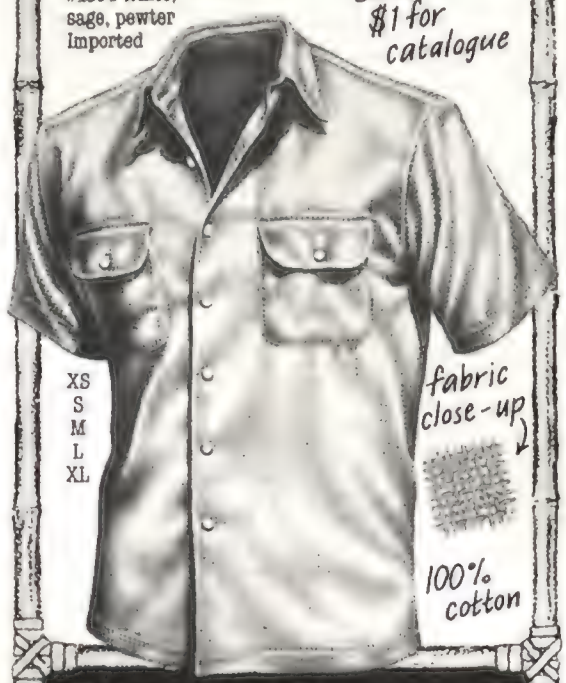
Last fall we published an account of the wild and woolly Alaska herring fishery (SMITHSONIAN, October 1986). For an office worker, one of the most remarkable sentences was a matter-of-fact statement near the end: ". . . by the following morning most of the seiners . . . are nowhere to be seen—gone on the 3 A.M. tide." It has been a rough life since the first Portuguese boats sailed for the Grand Banks 450 years ago. It would be nice if things are, indeed, looking up.
John P. Wiley jr.

Short-sleeved
VENTILATED shirt $18

A civilized fabric for uncivil climes, ventilated cotton has 230 cooling air chambers per square inch woven right into it. A very breathable bush shirt.

#1604 White, sage, pewter Imported

Send $1 for catalogue



BANANA REPUBLIC
TRAVEL & SAFARI CLOTHING Co

Please send Check, Visa, Amex, M/C, DC to 224 Grant Ave, Dept. L81, P.O. Box 7347, San Francisco, CA 94120
Add CA, NY, TX, OK Sales Tax and $2 for Shipping
Order Toll-Free 800-527-5200

THE SAILOR'S GAME
BY SPARKMAN & STEPHENS

The significant boardgame for sailors, edited by Sparkman & Stephens and rated highest in design by The London Times. Pewter game-pieces. No dice.
"A natural and classy gift for sailors." — Chicago Trib
"Highly refined and challenging" — Sailing Magazine
$45 plus $2 shipping ($10 outside Cont'l US). MC/Visa 1-800-835-2246 or send check to: Sailor's Game, Box 20382, Cherokee Sta., NY 10028

MUSEUM REPLICAS

ELEGANTLY GRACEFUL, a Trefoil Oinochoe from Corinth with 22 highly detailed animals. 625 BC. 10"H. British Museum. $126.00 ppd. In CA, add 6% tax. Check, Visa, MC, AmEx. Toll free 800-262-4382. In CA, 714-848-5401. Refund guarantee. Large selection of replicas handmade in Greece. Used in colleges. Send $3.00 for our catalog.
WORLD TREASURES
7691 Liberty Av., Dept. 707
Huntington Bch., CA 92647

Free and easy as
a gentle breeze.

ISN'T IT?

Here is your breeze to glide upon, your wave to ride. Here is the liquid crystal sea to run your fingers through. Find a cove. Glimpse a view. Bermuda shows a different face to all who come here.

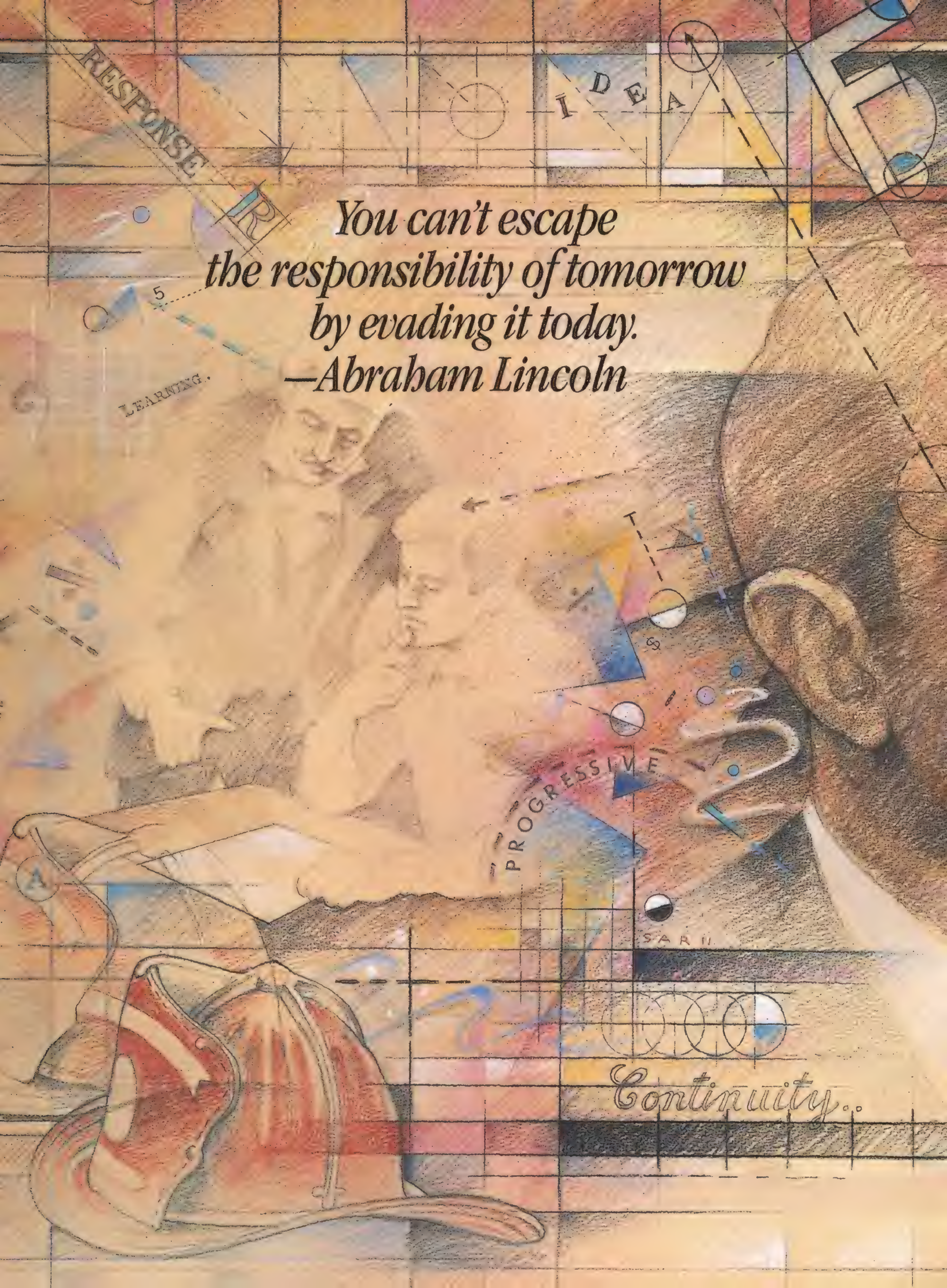
Call your
travel agent or:

1-800-BERMUDA

For a free Bermuda brochure call 1-800-BERMUDA or write Bermuda Department of Tourism, P.O. Box 7705, Woodside, N.Y. 11377

0665

You can't escape
the responsibility of tomorrow
by evading it today.
—Abraham Lincoln



FORESIGHT

Your corporate horizon extends far beyond the next quarterly report.

Something you may forget in the heated struggle for profits and market share.

Existing solely in the present catches up with you. Risks so lightly ignored arrive unannounced, often with devastating effects on your physical plant, your morale, your balance sheet.

Fireman's Fund protects you against these unforeseen risks. We've been there before. We understand.

But what really sets us apart from ordinary insurance companies is our ability to anticipate and to respond. The result of concentrating all our energies on what we do best — property and casualty insurance.

You know you're covered with Fireman's Fund because virtually every underwriting decision that affects you is made by experts well-acquainted with your particular business.

And because the select independent agents who work with us skillfully manage your risk coverage through changing circumstances.

Most important, you know that claim settlement will be swift and uncompromisingly honest. We're nearly $10 billion strong in assets, with the financial integrity to match.

Fireman's Fund. Cover the risks and tomorrow can only bring rewards. That's been our philosophy for 123 years.

FIREMAN'S FUND
INSURANCE COMPANIES
123 years of tomorrows.

The new 110,000-square-foot Wallace Wing, at a total cost of $26 million, adds 60,000 square feet

By Helen Dudar

New York's Metropolitan enters the 20th century with a bang

of exhibition space, 40,000 of which are devoted to 22 galleries on three levels. This is the second floor.

With the opening of the Lila Acheson Wallace Wing, a museum in itself, the great arts complex celebrates the achievement of the new

The Metropolitan Museum of Art, temple of high culture and just about the only place in New York whose weekend crowds approach the density of the mobs on Times Square, finally made it into the 20th century the other day—brilliantly, pridefully and expensively. You are probably expecting a celebration. First you will have to put up with a little history and a fast lesson in the economics of modern museumkeeping.

The economics are simple and harsh, and nobody

Color photographs by Robert C. Lautman

The Met's new 20th-century wing

Washed with light in sculpture gallery is David Smith's luminous *Becca*, 1965, of stainless steel.

has defined them as succinctly as the silky official who instructed a new curatorial staff member not long ago: "I want you to realize that the Metropolitan Museum is a machine for making money with art as its theme."

We're not talking corner candy-store finances here. Last year, the Met operating budget was $98.9 million. Its cash registers rang up $47.7 million from the sale of merchandise, books, meals, parking spaces and auditorium events. When the trustees determined that the endowment fund needed another $150 million a while back, they went foraging and managed to gather $152.3 million in four years. The endowment now stands at $322 million. Needless to say, it is never enough. There are terrible expenses; there are 19 exhibiting departments, each with at least one curatorial chieftain with a hungry eye on a few choice items that will enhance a collection said to number more than three million objects. The museum claims an annual attendance figure in the neighborhood of three-and-a-half to four million persons. In tourist season and out, the Met throbs with visitors, and crowds are a critical detail for oiling the money machine at a great institution.

We come now to the Lila Acheson Wallace Wing and the issue of 20th-century art at the museum, a subject that has become the new mythology of the Met. In the fond shorthand of some of the staff, the place is the "Lila Wing," the recently opened repository of its modern art holdings: 22 galleries spread through three levels of handsome spaces, with sudden, soothing views of Central Park and nice attention to myriad details: custom-designed light fixtures to ensure that no work will ever lack the right illumination, walls painted under the costly guidance of a color consultant, galleries furnished in armless seats so that no visitor will ever be tempted to loll in a place meant for brief repose.

A doubling in size since 1970

The Wallace Wing is the next-to-the-last addition in an expansion program that has transformed a huge and magnificent institution into a gigantic and magnificent institution; the building is now nearly double its substantial 1970 size. The place bears the name of Lila Acheson Wallace, cofounder with her husband, DeWitt, of *Reader's Digest*. A few years before Mrs. Wallace died in 1984 at the age of 94, her foundation gave the museum the first $11 million toward the $26 million building cost, along with money for some of the expenses of upkeep.

The chief benefactor's connection with this project is one of those lavish ironies in which the entire enterprise abounds. As far as anyone knows, Mrs. Wallace had a limited interest in the kind of art we think of as modern. Her personal collection was concentrated on

Pitched skylight floods 30-foot-high, 136-foot-long mezzanine sculpture court with natural light. Work at front left is by Tony Smith; at right by Henry Moore; black box in middle is by Louise Nevelson.

fine examples of Impressionist and Postimpressionist art, familiar imagery that makes no rude demands on the eye. She enthusiastically financed the museum's redesign of its Egyptian galleries, paid for most of the restoration of the facade and Great Hall, and established the funds to ensure that the hall will be eternally stocked with the extravagant displays of the fresh flowers she loved.

One of the oddities of this philanthropic saga is that no one seems prepared to claim the credit for her largess. Philippe de Montebello, director of the Met, says the museum applied to her foundation and Mrs. Wallace said, "Yes, I'd love to do that." Kevin Roche, the architect, says it could not have happened without Barnabas McHenry, who managed her foundation. McHenry insists it was none of his doing, although he certainly approves of it, and assigns the glory to others—notably Roche, whose architectural firm, Kevin Roche John Dinkeloo and Associates, handled the museum's expansion; and Douglas Dillon, who was the influential Met board president during much of the building period. Mrs. Wallace came to know and admire these two men, McHenry relates, and they "so captured Mrs. Wallace's imagination and enthusiasm and trust that if they had said they wanted to re-create the Eiffel Tower at twice the height, she would have said, 'Do it.' "

Indeed, through some periods of the Met's 117-year life, a 2,000-foot replica of the Eiffel might have stood a better chance than much of the art of our time. The record of the Metropolitan Museum on 20th-century art has been sporadically intelligent and more often eccentric, recalcitrant, careless, casual and, on one occasion, not entirely honest. But it is now the proprietor of what amounts to a substantial museum of modern

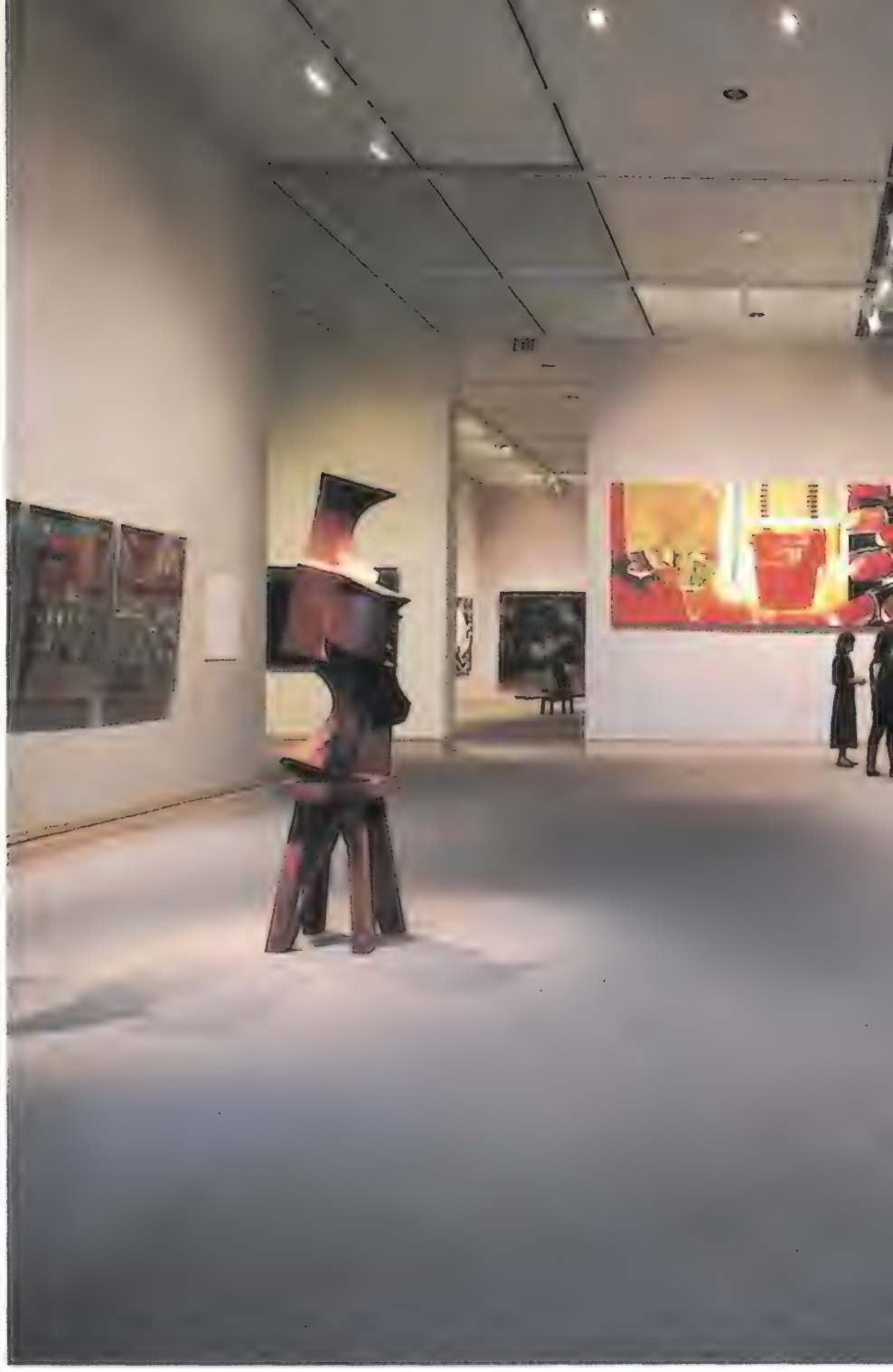
Helen Dudar wrote about the Los Angeles art scene in SMITHSONIAN, *June 1986, and about the Reves Collection in the Dallas Museum of Art in January.*

art and thus in the grip of a revisionist and self-congratulatory view of its history. Or as de Montebello insists, "We've collected [contemporary art] for 117 years; we aren't doing anything new except housing it."

A dissenter might start, however, by pointing to the episode of the Met's first Jackson Pollock. The museum actually bought a Pollock in 1952, the year after it was painted, a detail that suggests the Met was surely on the cutting edge of American avant-gardism. It takes a while to discover that the piece is no longer there. Seven years later when Pollock was dead and already the stuff of legend, Robert Beverly Hale, the museum's curator of American art and the buyer of that earlier work, came before the board of trustees, asking approval to acquire a more important mural-size piece, *Autumn Rhythm.*

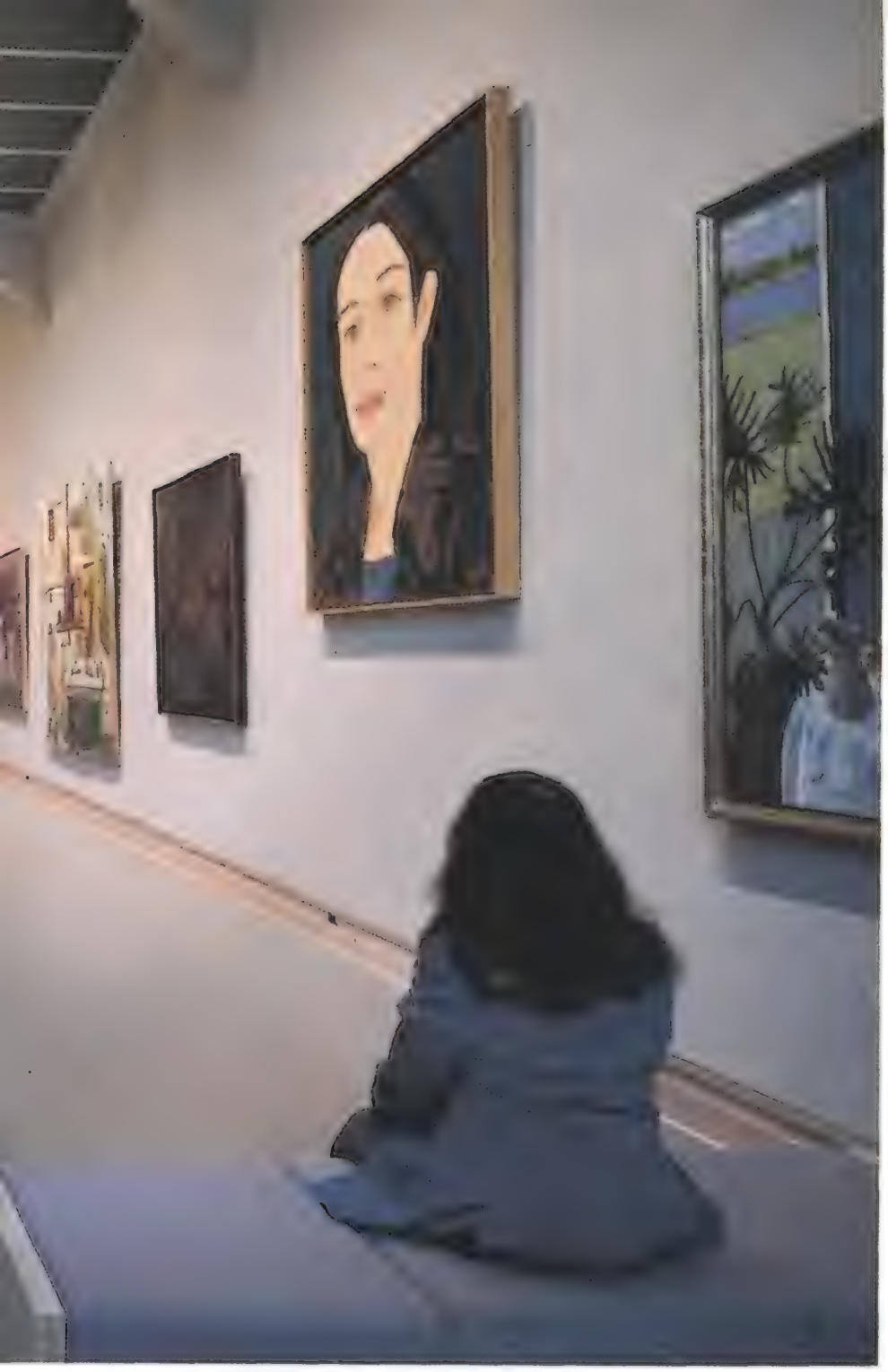
Now Hale himself was an artist and teacher, as well as a friend and summer neighbor of some of the major figures who had transformed American art and he was passionate about their work. It appears that he had his way only because he embarrassed the trustees. As he argued for the piece, Hale noted an absence of sympathy—indeed, undisguised hostility—and tears began to spill from his eyes. The board, which had never before confronted a weeping curator, voted to allow him his Pollock if he traded in the smaller work toward the $30,000 purchase price. "At most," says Henry Geldzahler, who was to become Hale's assistant and then curator of the newly established Department of Contemporary Art and who had his own trials with trustees, "they were only going to have one Pollock in the house." (Times do change: a few years ago, William S. Lieberman, the current ferociously busy head of the Department of 20th Century Art, rustled up a lot of money to buy a seminal 1943 Pollock canvas, *Pasiphaë.*)

Soon after *Autumn Rhythm* came to the Met, it turned up in the pages of *Life* magazine in the com-



Spacious galleries on second floor have 20-foot-high ceilings and both natural and electric light.

Portrait by David Hockney is of Henry Geldzahler, at one time curator of contemporary art. Outspoken Geldzahler was admired by many artists.



Work shown here is mostly by American artists; left wall by Romare Bearden; portrait, right, by Alex Katz.

Major funding came from a foundation set up by Lila Acheson Wallace, cofounder of *Reader's Digest*. It was one of her many gifts to the museum.

pany of James J. Rorimer, then director of the museum. He was, somewhat ludicrously, inspecting the drips through a magnifying glass. It created quite a stir among the community of artists who were about to be enshrined, at ever higher prices, as the New York School. Dore Ashton, the critic, who knew most of them and has chronicled their lives and times in many books, recalls that, after the guffaws at the magnifying glass faded, the general reaction was cold fury. Neither the museum trustees nor its director, she observes, could qualify as champions of abstract art.

Abstract Expressionism flowers

This may seem an aberrant in an age when new art is instantly commercial, fashionable and bankable. In fact, the epic flowering of Abstract Expressionism that began in the 1940s may have been the last major movement of our century that was not immediately embraced by the art establishment. You could buy a Mark Rothko at a Macy's art sale in 1941 for $200 and a Willem de Kooning at the Kootz Gallery in 1949 for $700. The other great names—Franz Kline, Hans Hofmann, Barnett Newman, Robert Motherwell, Adolph Gottlieb—attracted a few collectors, a few dealers, a few shows.

There was, as well, a small band of admirers of these "very, very serious" practitioners of the new art and they became part of the audience at the Artists Club, or simply the Club, which for a few years was the hot center of esthetic and political debate. Museum people sympathetic to their cause came to talk. Fledgling critics and artists came to listen and argue. Offering a memory of the experience in *The New Criterion* last summer, Larry Rivers, who was a few years away from his own fame, wrote: "Another thing about the early Artists Club is that no one was commercially successful. That was meaningless. It was like belonging to a church. Not receiving awards for making art somehow made the concerns even stronger."

As Ashton notes in *The New York School: A Cultural Reckoning*, they were outsiders by choice, "proud of their penury . . . and their absolute isolation from uptown mores." On the other hand, they had an ideological faith in their art that both scorned authority and demanded its respect. Naturally they attracted some attention from the Museum of Modern Art (MOMA), which was spawned at least in part to counter the Met's neglect. When the Metropolitan announced a major jury-selected show of American art in 1950, the dominant downtown painters issued an open letter denouncing the whole affair (the jurors were painters and curators thought to be hostile to the new art) and urged a boycott of the event.

The Met's record hardly inspired confidence. Its

These second-floor galleries display work mainly by notable American artists who came to prominence in the 1940s and '50s. The marble sculpture in the foreground is by Isamu Noguchi, titled *Kouros*.

first major funds for the acquisition of contemporary art were established early in the century by trustee and department-store magnate George A. Hearn, who contributed $250,000 in his own and his son's name and pretty much took charge of spending the income generously and sagely on living American painters. After Hearn's death in 1913, the trustees, whose tastes ran to the secure past, fell with relief on a proposal that Hearn meant his money to be spent on artists who were alive at the time his first gift was made in 1906. Even then, they had trouble disposing of the annual $10,000 income. In 1927 someone noticed that the fund had accumulated a surplus of $90,000 and made a public fuss. The Metropolitan obliged by disbursing the entire sum on *The Wyndham Sisters* by John Singer Sargent, who had been dead since 1925.

Every few years a critic would complain about the way the Hearn funds were spent or unspent or about the absence of coherent policy on contemporary art in general. And every few years the authorities would make an effort to correct the problem, sometimes with encouraging results. But under the most benign circumstances, the Metropolitan periodically seemed to be seized by lethargy. In 1949 Georgia O'Keeffe gave the museum around 400 prime works assembled by her late husband, Alfred Stieglitz; the gift included a large number of his photographs, ten of her own paintings and her works on paper, 11 Marsden Hartleys, more than 100 John Marin watercolors and such European masters as Brancusi, Picasso and Matisse. Though there were exhibitions and publications beginning in the '60s, 30 years later when William Lieberman arrived at the museum to be chairman of the 20th-century department, the collection still didn't have permanent gallery space.

Hoots and howls from the trustees

In the old days, trustee approval was required for any acquisition costing more than $5,000 (a policy now considerably eased). In common with many professionals and much of the public, the men and women of wealth or distinction who presided over the Met found it hard to accept art that, in their view, was not about anything they could immediately comprehend. To make life a little easier for Robert Hale, the board gave him a three-man advisory committee which, it was hoped, would be less likely to hoot and howl when he displayed an abstract piece he wanted to buy. One of the members, Elihu Root jr., finding the chore almost unbearable, cooperated the only way he knew how. According to Calvin Tomkins' history of the museum, *Merchants and Masterpieces*, Root's response to a new piece would be a hand clasped to his eyes and a shuddering "I can't look, Bob. If you think the museum should have it, I'll go along, but I just can't look."

When Hale retired in 1967, advocacy of contemporary art passed to Henry Geldzahler, a cheeky, bright-as-brass, roly-poly New Yorker who, seven years earlier at 25, had been plucked out of his Harvard doctoral program by James Rorimer. The Metropolitan's director hired Geldzahler over breakfast at the Ritz Hotel in Boston after he told Rorimer that, although he had spent a summer interning at the Met, he really hoped to work for the Whitney Museum.

"Why?" a shocked Rorimer demanded.

"Because they're interested in contemporary art and you're not," he answered. "You're an encyclopedia without a last volume and in 25 years you're going to find that you can't go back and buy."

After a moment's silence, Rorimer asked, "Could you start working in the summer at $5,000 a year?"

"Let me call my father," said Geldzahler. Father was willing to supplement the Met's sparse wage by paying his son's rent and that clinched the deal.

The persistent prophet of Pop

Gregarious, knowledgeable and eager, Geldzahler set out to cultivate the city's modern art dealers and working artists and became the prophet of the young burgeoning Pop movement. Before long, he was sending lengthy messages to his director deploring the absence of major Europeans in the modern collection. As early as 1964, Geldzahler also began nagging Rorimer about a new building to hang scores of works that never got out of storage. Initially, his department was allotted a single gallery to show new work. Later, the space was expanded but moved from area to area like unclaimed baggage.

Geldzahler's public triumph was the show of painting and sculpture from 1940 to 1970—408 works by 43 New York artists—that kicked off the museum's centennial celebration. The scale was in keeping with a Geldzahler maxim that had the agreement of the Met's new director, Thomas Hoving. "In order to get people to give you things," Geldzahler kept saying, "you have to announce you're interested." From conservative critics without and within the walls, there was, of course, dissent. Walking through the installation before opening time one day, Geldzahler's assistant curator, Kay Bearman, passed a freestanding Robert Rauschenberg piece, *Odalisk*, which had a rooster perched on top. Her eye was caught by an unfamiliar element: an in-house wag had deposited an egg under the bird. It was, at least, a fresh egg.

Collectors did offer modern works in greater abundance: seven *Homage to the Square* geometric canvases from Josef Albers, ten Hans Hofmann paintings from the artist's widow. The trustees grew a trifle

This is a long view of specially installed work by Robert Rauschenberg, *1/4 Mile or 2 Furlong Piece.*

younger and fractionally more sympathetic to the cause of modern art. When Geldzahler twice failed to win their approval to buy David Smith's *Becca,* a masterpiece of the sculptor's last year, he persuaded them to acquire it through the exchange of a half-dozen small paintings (Renoir, Bonnard, Modigliani) from a major bequest. Along with *Becca,* Geldzahler got a prime Richard Diebenkorn painting at a bargain price and a cloudburst of abuse. The critics felt the Met had given up important pieces by major artists. The uproar, he insists today, was "crazy"; what the Met relinquished were minor works never considered important enough to hang on its walls.

The items that slipped out of Geldzahler's hands are burned into his memory. "I got the greatest Matisse cutout, a 12-foot picture, the one with the rabbit and the jug, and they turned it down. I brought in a full-scale drawing by Arshile Gorky for the portrait of his mother—can you imagine a more important piece? I went around to each trustee and asked them 'Please.' I was sitting next to Henry Luce and he said, 'Son, I won't vote against you.' It was turned down anyway and ended up, I think, in Chicago. It was crushing, crushing, but it didn't stop me. There was a great, great Brancusi coming out of India, a $5 million piece now, costing only a couple of hundred thousand then. They turned it down. There was a Jasper Johns big white flag and Rauschenberg's *Rebus,* the best works. Someday we'll have a show of things the Metropolitan didn't buy."

The departmental stepchild

Geldzahler was the most visible of modern curators. Still, "We were a kind of stepchild," recalls Lowery S. Sims, associate curator of the department. "Up until the early '80s, when we'd go to a cocktail party we'd still find people who were very surprised that we had a 20th-century department." Geldzahler left in 1978 to become the Commissioner of Cultural Affairs for the City of New York. In City Hall a few years later, he would successfully argue for an $8 million municipal contribution for the addition.

In keeping with the museum's fitful interest in modernity, the 20th-century wing seems to have been a happy afterthought. Although the museum says space for modern art was always part of the master plan for expansion, the Met's 64-page color booklet, *The Second Century,* issued in 1971, does not mention housing of any kind for contemporary works. In 1976, with an offer of $20 million from publisher Walter Annenberg, Thomas Hoving, then director, proposed building a state-of-the-art communications center in the space and was howled down by civic protesters. Kevin Roche, who has presided over almost 20 years of design, renovation and building, not to mention Sturm und Drang, at the Metropolitan, says that after that episode, as the modern collection visibly grew, the idea of building a contemporary wing slowly evolved.

The project seems finally to have taken hold with the arrival of William S. Lieberman. Given the treasures he attracted, the museum could hardly do less than build a space to display them in. Lieberman, 62, has spent his entire life with and around artists and art and, until late 1979, all of his working time—34 years—at MOMA. An unpredictable man whose manner can range from cozy charm to snappish irritability, he established MOMA's departments of prints and drawings and was famed for his authority, his polished and unorthodox approach to installing shows and his unmatched talent for making friends of famous and openhanded collectors.

Lieberman hardly had time to accumulate the cus-

The shoes made for long walks in the country.

Robert Sweetgall did a coast to coast trip most travel agents would advise against.

A trip that included 168 stop overs. In such places as Kalamazoo, Michigan. Three Forks, Montana. And Big Stone Gap, Virginia.

His itinerary included sight-seeing in the middle of the Mojave Desert. Strolling 300 miles through a couple of Montana blizzards. And spending a restful night sleeping on the dining room tables at Angie's Stone Baked Pizza.

All in all his 11,208 mile trip took about a year.

Which isn't bad. When you consider all he had was two legs and a couple pairs of Rockports to carry him through it.

Rockport
Marlboro, Mass.

Available at: Open Country, Eddie Bauer, American Eagle Outfitters, REI, Overland Trading Co., Hanover, Big Sky.

© 1987 The Rockport Co. all rights reserved

tomary epic clutter of his office when the shower of gifts began. Muriel Kallis Steinberg Newman, a Chicagoan, announced that the museum would inherit, among other holdings, 67 important postwar works. Heinz Berggruen, a Swiss dealer and collector, gave the museum his Klees, 90 of them to add to the meager two the Met owned. Lee Krasner, widow of Jackson Pollock, donated 40 of his drawings, and the Mark Rothko Foundation turned over 13 of his works.

It is impossible to overemphasize the importance of the Klee gift alone. That the museum now has one of the largest collections of Klees in the country is merely a statistic. The museumgoer who has never seen many Klees in one space has yet to experience the astonishing range of his art (SMITHSONIAN, February 1987). Lieberman is fond of relating how he asked a friend who is director of a museum in Australia, "Why don't you have any Klees?" and was told the obvious: "Billy, you have to have more than one."

Only a few months before the February 1987 opening, Lieberman was still guiding friends and potential donors through the wing. Building had actually been completed more than a year earlier, but right down to the wire, the museum was compelled to continue the pursuit of endowment money; in a sense, rooms in the new wing were for sale at seven figures. As the rush of media attention got under way, the most startling images encountered were shots of William S. Lieberman in the wheelchair he had adopted while supervising the picture-hanging.

At other times, Lieberman might be found proceeding through his territory at a gallop. A gallery walk with Lieberman, while hard on the calves and the eyes, can be enthralling. Here is Lieberman zigzagging through the parts of the wing some weeks before its grand opening (when works were still leaning against walls and installation had just begun) that offer art from the 1940s until the day before yesterday: "That's a drop-dead wall of de Kooning . . . a late Ben Shahn, *Death of a Miner*, a wonderfully moist Loren MacIver . . . one of Kuniyoshi's great paintings, a late painting, Motherwell, Rothko, Morris Louis . . . Ad Reinhardt, geometric Albers, a superb Kline, two Hofmanns that aren't kitsch . . . Ellsworth Kelly's *Spectrum*, [Cy] Twombly, and lest we forget, very good realistic painters of the same period, Fairfield Porter's marvelous portrait of Elaine de Kooning . . . there's no better Rosenquist . . . and popsy poopsies [Pop artist Roy Lichtenstein], the best, there's none better."

This master of modernity doesn't own a TV set, fearing addiction, at least to the brilliant commercials. Except for the summer months, he is at his job seven days a week and is frequently to be found in the galleries: "I like to see how people are looking." He worries that visitors are apt to examine labels with more interest than pictures get. He worries about the intrusion of cassette tape players—walkie-talkies, he calls them—that museums now rent out for major shows, fearing that the viewer may listen and forget to look. He has an indelible memory of a short, elderly lady attached to a walkie-talkie ear-set for a big Matisse cutout show at MOMA some years ago, making her way through a photography exhibit. When he stopped her and gently explained her error, she snapped, "Young man, it works just as well here."

Time has given the Metropolitan a board of trustees who are more amenable to the idea of new art. Some of them like it and collect it, some of them don't, but, according to de Montebello, distaste is no longer an impediment to the purchase policy. Still, it is easier to find supporters on the outside. Many of Lieberman's buys—and he buys a good deal—are the result of a single telephone call, de Montebello says. "Ninety percent or more he buys by calling you saying, 'I just saw this wonderful thing—it's $3,000.' You'll send him a check and say, 'I'll come see it next Saturday. Let's go to the gallery together.' "

The bracing thing about solicitation of that sort is that it is done with the conviction that the donor has been favored. The Metropolitan is not, its director says firmly, a "charity." It does not beg; rather it offers a benefactor not only the chance to help, but the satisfaction of seeing the family name on a Met wall label. Here may be the best expression of the museum as money machine. De Montebello reports he actually gets thank-you notes from supporters grateful for the opportunity to serve the public through the Met.

William S. Lieberman, head of new wing, holds wall panel; books are also part of Rauschenberg room.

Douglas Kirkland/Sygma

MAYBE YOU C
WORLD, BUT FO
YOU CAN

SKIPPED LUNCHES. MISSED DINNERS. LOST WEEKENDS. IT'S THE MERRY-GO-ROUND THAT'S COMMONLY KNOWN AS THE WORKADAY WORLD.

WHERE IT STOPS NOBODY KNOWS. BUT AN NCL CARIBBEAN CRUISE IS WHERE YOU GET OFF.

AS THE EARTH RECEDES IN THE DISTANCE, YOU CAN ALMOST FEEL YOUR CARES AND TENSIONS DISAPPEARING WITH IT. AND YOU SOON DISCOVER THAT, IN OUR WORLD, YOUR DAYS REVOLVE AROUND AN ENTIRELY DIFFERENT ROUTINE.

HERE, THE TOUGHEST DECISION OF THE MORNING IS WHETHER TO ORDER EGGS BENEDICT OR THE SMOKED SALMON. HERE, THE AFTERNOON'S ONLY FACE-TO-FACE NEGOTIATION IS WITH A GREEN ANGELFISH SWIMMING ALONG A CORAL REEF.

AN'T STOP THE
R A WEEK OR SO,
I GET OFF.

IT'S A WORLD WHERE THE PRIMARY COLORS AREN'T SHADES OF GREY. BUT WHERE PASTEL HOUSES PEPPER LUSH, GREEN HILLSIDES AND WHITE BOATS BOB LAZILY IN AQUAMARINE LAGOONS.

AND, PERHAPS BEST OF ALL, GUIDING YOU THROUGH THIS WORLD ARE THE SIX SHIPS OF NCL. SHIPS OF UNPARALLELED ENTERTAINMENT, SUPERB DINING, AND SERVICE THAT'S EVERY BIT AS CRISP AS THE LINEN ON THE TABLES.

SO CALL YOUR TRAVEL AGENT TODAY AND ASK ABOUT AN NCL CRUISE. YOU'LL BE SURPRISED HOW DIFFERENT THINGS LOOK ONCE YOU STOP GOING AROUND IN CIRCLES.

NORWEGIAN CARIBBEAN LINES®

SEAWARD, SOUTHWARD, STARWARD, SKYWARD, SUNWARD II,
THE NORWAY. SHIPS' REGISTRY: BAHAMAS

Joy A. Guravich

A cattle egret with the buffy head and neck swatches of breeding plumage takes off near Freeport, Texas.

By John Heminway

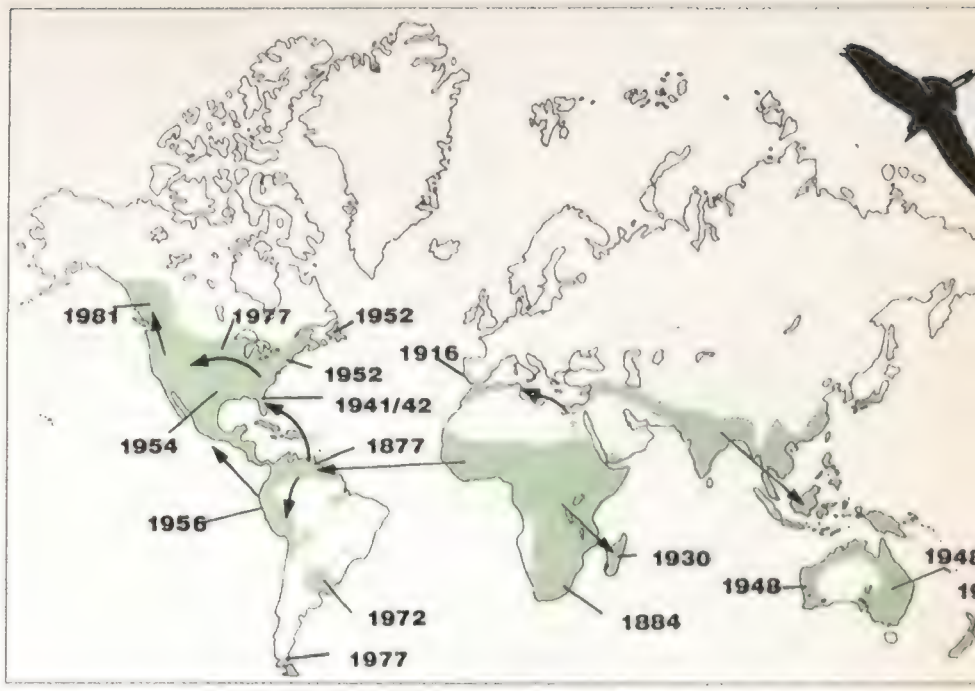
An African bird makes its move around the world

The cattle egret arrived in the United States only about 45 years ago and now outnumbers all other herons of North America combined

Every summer, amid great fanfare, another oddity attempts the Atlantic. A few years ago it was a seven-foot sailing dinghy. Several rowboats, some in the shape of Cuban cigars, have reached the far side. Swimmers, clothed in neoprene, have not been so successful; balloonists have. The hoopla and acclaim are always deafening, for no matter how many atoms Man splits, he will always look small against a large ocean.

Cattle egrets (*Bubulcus ibis*) look even smaller against the Atlantic, but when they made possibly the most remarkable crossing of all, from Africa to the Americas, nobody noticed. Weighing no more than one pound, their heads hunched into their shoulders as if they are forever trying to stay warm, they appear far too delicate and ill-equipped for such a long and battering journey.

Not only did the cattle egret survive the ocean crossing, but it has prospered in the New World beyond anyone's imaginings. Roger Tory Peterson calls this achievement the "greatest story of bird colonization in my lifetime." Others note that only one other higher vertebrate species, Homo sapiens, has colonized continents with such aplomb. Today, just 45 years after arrival, the African cattle egret probably outnumbers all other North American herons and egrets combined. With no overt human encouragement, it has invaded all of our states (in Hawaii, the egret was introduced) as well as nine Canadian provinces and it has nested in most regions of North America. How this bird crossed, why it found the Americas so welcoming and what it is doing to nature's symmetry here are not matters that can be resolved by hard evidence, even though the bird's arrival is recent.



The birds have radiated outward from their original home in central Africa during the past hundred years. Simultaneously an Asian subspecies moved southeast throughout Indonesia to Australia and New Zealand.

Hard to find as late as 1957

During the spring school holidays in 1957, my mother decided to indulge me, then age 13, with an Audubon bird-watching expedition in Florida. She had read Alexander Sprunt jr.'s report of the cattle egret's arrival in North America and had advanced the notion that the enormous human brain would continue to be surprised, even baffled, by the whimsy of smaller brains. To prove her summary correct, we joined Sprunt, a graying avuncular presence, gentle and driven, as he toured first the Corkscrew Swamp and later the southern perimeter of Lake Okeechobee, in search of snowy egrets, roseate spoonbills and, especially, cattle egrets. He believed that more than storms had caused the cattle egrets' wanderings. As much as he tried, however, he never was able to scare one up for us to see.

Twenty-nine years later, I went bird watching with Sprunt's son, Sandy, near his home in the Florida Keys. Traffic was bumper to bumper on U.S. 1, the narrow highway that links the mangrove shallows of the mainland to Key West. Twice we left the road to examine rookeries where, according to Sandy, cattle egrets had proliferated in previous years. And each time we were disappointed.

"Just as I thought," Sandy said at last, putting the brakes to his rusty station wagon. Three cattle egrets were "grazing" the median strip of the road not far from an apartment complex and a gas station. Two were white and the third displayed an orange-buff fan of feathers on its nape. "Breeding plumage," Sandy observed. What struck me, the amateur naturalist, was the sheer banality of the scene. While it would have been difficult to find a noisier or more developed spot this side of Miami Beach, these cattle egrets appeared to be in their true element. In Africa, where I had encountered them often, they generally flew away when I approached closer than, say, 100 feet. Here they went peaceably about their business inches away from a rush-hour ribbon of humanity.

"You see, the gang mower has just been through and they're looking for the insects it dislodged," Sandy said. Just then the bird in breeding plumage made a lightning-quick lunge and speared what, from a distance, appeared to be a small lizard or frog. "They're opportunists—that's all."

And so the three hunters advanced, following the highway department's lawn mower. In Texas or Tennessee I might have seen a crowd of cattle egrets following chisel plows for the same purpose. In North America, I decided, the farm implement has, in many instances, replaced the Cape buffalo.

Photographs by Dan Guravich

John Heminway

In Tanzania's Ngorongoro Crater, cattle egrets wait for a wildebeest to stir up insects and other prey.

Cattle egrets, which are wary of humans in Africa, hunt right behind a tractor plowing a field in Texas.

"I wouldn't swear that a storm drove the cattle egrets across the Atlantic," says Sandy, more formally known as Alexander Sprunt IV, vice president and director of research for the National Audubon Society. "Could have been just a strong easterly wind."

Almost every year, African cattle egrets are sighted on Ascension Island, St. Helena and at Tristan da Cunha—each more than 1,000 miles from the African mainland—evidence of the bird's ability to disperse westward across open water. Sandy measures the distance between the bulge of Africa and the corresponding bulge of South America at 1,900 miles. "It's a wonder the cattle egret didn't arrive here sooner, for if you figure a flying speed of 20 miles an hour with the prevailing 20-mile-an-hour tail wind, a flock would be in South America in less than two days—and that's certainly within its capability. My guess is that the birds didn't intend to set to sea, but they were blown offshore and, essentially, they had no choice: they had to keep flying. We get Sahara dust here regularly."

Cattle egrets were first reported in Dutch Guiana (now Suriname) as early as 1877, later in British Guiana (now Guyana) in 1911. Both of these dates are based on occasional sightings: the first specimen was not collected until May 27, 1937. F. Haverschmidt, an ornithologist who had lived for several years in the Guianas, admitted in the end that "We do not know where the cattle egret landed in South America, nor when. . . . We further may ask whether all the cattle egrets now found [in South America] are the descendants of one single flock which survived the first crossing and which settled down in a favorable area. Or does some immigration still regularly take place? We cannot give an answer to all these interesting questions, but the unhappy feeling remains that a wonderful event has occurred about which we know very little."

Willard E. Dilley, now retired from the staff of the Everglades National Park, was credited by Alexander Sprunt jr. as the first person to correctly identify a cattle egret in North America. Today Dilley and his wife live south of Tucson, Arizona, and both still continue to add to their bird lists. "It was plumb ridiculous," recalls Dilley. "I should have published a detailed account at the time." Because he did not keep records, Dilley cannot be certain of the exact date of the sighting. "From memory I would place it in 1941, but it could have been 1942. It had to be before 1943 because that's when I entered the U.S. Navy." At the time, Dilley was in Clewiston, Florida, on the southwest corner of Lake Okeechobee. The group of cattle egrets he observed consisted of two adults and one immature, and he saw them for several days in a marshy pasture grazed by cattle. For years afterward he was certain the egrets had escaped from a zoo (only in 1953 did he realize his error). He never took a photograph.

No further observations were made for ten years. Alexander Sprunt jr. believed, however, that the bird was always present. "That seems incredible," he wrote,

John Heminway has studied the cattle egret both in its homeland and in Texas. He wrote about wildebeests of the Serengeti in the February issue.

Some ornithologists believe it is modern agriculture that has enabled the bird to live around the world.

On a Mississippi levee the birds produce a mirror image of their hunting tactics in their African home.

"but the facts, being what they are, are inescapable. The most reasonable explanation would appear to be that there were a few scattered birds seen with white herons feeding with cattle—so commonplace that no one thought of examining any closely."

This small member of the heron family is generally white with a short yellow bill and irises, and with dark green, nearly black, legs. In the breeding season, it undergoes an alteration: extravagant orange-buff plumes appear around its neck, on the crown of its head and on its back (hence its other name—the buff-backed heron). Even more confusing, its somber-colored legs are transformed to tones varying from yellow to bright red. But except when breeding, it can be mistaken for a snowy egret or an immature little blue heron.

On March 12, 1952, wildlife filmmaker Richard Borden made what is therefore an understandable oversight. While driving along northeast of Lake Okeechobee, he spotted three snowy egrets feeding with cattle. Because he had never before filmed these birds in the same frame with a domestic animal, he stopped his car, mounted a large telephoto lens on his camera and exposed nearly a hundred feet of film to demonstrate how they fed on insects disturbed by the cattle's hooves.

Nearly two months later, now returned to his home in Massachusetts, Borden was advised by Roger Tory Peterson to reexamine the footage because there was evidence that cattle egrets had been extending their range into the United States. On his second look, Borden discovered he had taken the first image of a cattle egret in North America.

On April 23 of that same year, Allan Morgan, Richard Stackpole and William Drury jr. were birding near Wayland, Massachusetts. Drury, having seen cattle egrets in British Guiana during the war, this day had no difficulty in identifying the lone bird at the edge of Heard Pond on Mrs. Francis Erwin's farm. "Sensitivities were different then," he notes today on the telephone, speaking from his home in Bar Harbor, Maine. "Before the environmental movement, if you wanted to convince people that you had found a rare bird, you shot it."

The lone cattle egret was skittish; by the time the three birders had found a shotgun in Mrs. Erwin's house, the bird had vanished. A private pilot was hastily impressed into service and, with Allan Morgan as spotter, the lone egret was rediscovered some two miles away on the far side of the Sudbury River. It was here that Dick Stackpole shot the first positively identified cattle egret in North America.

Ornithologists suspected the bird was nesting in North America, but proof was not forthcoming until the following year when Glen Chandler and Samuel A. Grimes, an engraver during the week and amateur ornithologist and photographer on weekends, spotted a nest and one egg in a heron rookery on an island in Florida's Lake Okeechobee, three miles from the mouth of the Kissimmee River.

In May 1954, Sam Grimes found a colony of several hundred nests on another island in Lake Okeechobee, an event that prompted Alexander Sprunt jr. to estimate the state's population at 2,000. Three months

Nests speckle the trees of a Palmer, Texas, rookery where 12,000 cattle egrets mix with little blue herons. Their gregariousness may help in protection from predators or in better use of available food resources.

later, 20 pairs were spotted at Eagle Lake, Texas. Where would it end? Ornithologists made all kinds of speculations. Peterson suggested the bird would do well in the central valleys of California, but did not expect it to breed in the Northeastern states. No sooner had he gone to press than a nest was discovered in New Jersey. By 1981 this African wanderer had been seen in Alaska.

The cattle egret is certainly not America's only successful Old World import. The house sparrow and the starling were hand carried over in the last century and have done all too well. That the egret prospered in a vacant niche here will come as no surprise to anyone with a backyard feeder, a lawn or a kitchen garden. But species whose ancestors crossed the Atlantic of their own accord are few. William Drury likens the egrets to Australian citizens whose forebears did not arrive in leg-irons.

Exploiters of a friendly habitat

"I don't think there's anything quite like the cattle egret," says Sandy Sprunt. "The next best candidate might be the glossy ibis which, *possibly*, got here the same way. Audubon never saw an ibis throughout his travels, although two specimens were sent to him from Louisiana. It leads me to think they were then just getting established here. In any case, they were real rarities in the 19th century, and even up to the 1930s they were seldom seen north of Florida. Now they breed in New Jersey. But the niche they found was nowhere near the scale of the one that the cattle egret has exploited."

Sandy Sprunt equates the cattle egret's opportunism in North America to that of the brown-headed cowbird's. Originally a denizen of the open prairie in the Midwest, the cowbird moved east as forests were felled to make way for croplands. The cowbird had, in a sense, found a window of opportunity that humans made available. So had the cattle egret.

There is probably no better place to observe that cattle egret niche than in Texas today. Raymond C. Telfair II of the Texas Parks and Wildlife Department, who has recently published North America's most comprehensive study of the cattle egret, is reluctant to estimate the total U.S. population. "A few millions," he says sweepingly. But as regards Texas, he can be more precise. Tall and thin, Telfair settles himself in a chair, long limb by long limb, removes his pipe from one pocket, a packet of Symphony tobacco from another and begins tamping. A brief mustache gives his gaunt face an added measure of gravity. He explains that for a period of 15 years his life was almost exclusively tied to the fortunes of cattle egrets. "In 1959," he intones, "there was a probable minimum of 48 breeding adults in this state. By 1979 these had increased to at least 644,640. Today . . ." (he pauses for the sake of accuracy) "there are well over a million. Don't know. But we think that in Texas the cattle egret has peaked."

Inside the perimeter of a grove (center), trees are dead or dying, victims of excessive cattle egret guano.

One interesting strategy of the cattle egret is its inclination to nest in established heronries usually occupied by snowy egrets, little blue herons and tricolored herons. In Texas, cattle egrets are often the last of the colonial nesting birds to breed, sometime in April, and occasionally they will take over vacant nests. In northern parts of the United States, the arrival of cattle egrets in nesting areas is synchronized with that of other species. Some biologists argue that the cattle egret will compete by robbing nesting material and, often, ejecting other young. But Telfair believes such behavior is not the norm, nor does he feel that it has led to any significant decline among other species.

Nests will contain from two to five eggs. When food is short, the last hatched may suffer. But in Telfair's experience, having banded some 20,000 cattle egrets, "Food is not the limiting factor. . . . I wish I knew if indeed there is a 'limiting factor' in Texas." Unlike others in the heron family, cattle egrets do not nest next to water because it is a source of food. Most days cattle egrets will leave their nests and fly up to 20 miles

Julie Mull of East Texas State University examines a chick before putting an identifying band on its leg.

in search of insects and frogs. The results of such journeys is the concentration of nutrients (in the form of nitrate and phosphate) from a great range into a very small area. Such guanification at the base of nesting trees sometimes leads to the trees' destruction (p. 65).

Others in Texas complain that not only trees suffer. In Marlin, which lies near the Brazos River between Fort Worth and Houston, an estimated 5,000 cattle egrets several years ago chose to nest at the top of hackberry trees in Althea Mae Jones' vacant lot. Soon there was an outcry. Arthur Douglas, who was a neighbor, complained that some birds were nesting in his chimney and "cooling themselves in the quiet of his garage." Other residents complained of the smell, the noise and the general uncleanliness of the birds. After the birds left that year, the trees were cut down.

Marlin is not alone. A few citizens of Ennis, Texas, took matters into their own hands when 18,500 pairs started nesting there, harassing the birds with shotguns and noisemakers. Their campaign was illegal and was stopped, but the birds moved on anyway, settling nine miles north in Palmer, next to a site where the Assembly of God was to build its school. Parishioners began complaining that young birds, fallen from their nests, were wandering the streets and dying on lawns.

In Bellmead, on contract for the adjacent Inn-7 West Motel, a bulldozer began to remove the trees where 20,000 egrets were nesting. The operation was stopped when it was realized that the egrets, as migratory birds, were protected by law. Once the nesting season was over, the bulldozer returned. Ed Gummelt, a former owner of the motel, explained that the area was being cleared because motel guests had complained—and anyway, nest removal would "alleviate a health hazard."

For many of these conflicts involving human-egret competition, Telfair has been summoned to serve as arbiter. He found that the public response to the birds can be "overreaction . . . the Alfred Hitchcock syndrome." The birds often nest near human settlement, possibly because that is where large canopy trees have been saved. True, the smell of the birds might be offensive and their effects on trees not altogether in the public interest, but to date, Telfair adds, there is no evidence that the birds transmit histoplasmosis, encephalitis or arbovirus—commonly feared infectious diseases. In fact, he says, the presence of cattle egrets is altogether a benefit to mankind.

Cattle egrets, argues Telfair, obtain 95 percent of their food at the feet of grazing animals. Grasshoppers and crickets, along with spiders and cattle-associated flies, constitute most of the bird's diet. During a five-month period, Telfair found that each parent takes an average of 638 prey items each day. In Texas, this amounts to about 150,000 pounds of insects eliminated *daily* at a time when these insects are at their peak.

Any bird watcher will appreciate the effectiveness of the cattle egret as predator. The bird can use a cow's back as a movable perch from which to observe insects struggling to avoid hooves, but more often the bird will follow the grazing animal on foot. When the pickings are favorable, every 30 seconds or so the solemn little bird will strike into the grass and emerge with a wriggling grasshopper immobilized in its bill. The egret's head bobs slowly back and forth, presumably to facilitiate depth perception. Other times, its arched neck will mysteriously bend and bow as it waits for an insect to make the first move. The relationship with cattle is not exclusive: the bird will just as readily follow a tractor and plow (pp. 62-63).

Migrating with the best of them

In his pioneering study, Telfair shows that the cattle egret's movements in North America are not only dependent on weather. It departs Texas when the food supply declines in autumn as the weather turns colder. While a few remain along the Texas coast throughout the winter, the great majority migrate to southern Mexico, Guatemala, El Salvador and Costa Rica. Those that pass through Florida leapfrog via the Dry Tortugas and the west end of Cuba to the Yucatán peninsula. Another population transits Cuba and Jamaica, bound for its wintering range in Colombia.

Herein lies another enigma. How can a bird that originally did not migrate suddenly develop such a complicated adaptation in its new range? Neither Telfair nor Sandy Sprunt have ready solutions. Both, how-

THE TOYOTA TOUCH

Common Courtesy

Just One Aspect Of The Toyota Touch.

Common Courtesy. When you walk into a Toyota dealership, you're more than a customer. You're a guest. You can expect to be treated like one. Your satisfaction is important to us. If you have a question or concern, we want to know. Talk to your Toyota dealer, or call our toll-free number: **1-800-331-4331**
Quality. Value. Satisfaction. Every mile of the way. That's the Toyota Touch.

WHO COULD ASK FOR ANYTHING MORE! **TOYOTA**

Get More From Life... Buckle Up!

© 1987 Toyota Motor Sales, U.S.A., Inc.

ever, suggest that the answer might lie in the species' birthplace, in Africa.

On any given midday in Tanzania's Ngorongoro Crater, the resident cattle egrets can be seen clustered at the feet of wildebeests (p. 62). Some elongate their necks to peer through sedges; others hunch their heads into their breasts, as if sated. Throughout the year, these birds rarely travel beyond the 100 square miles of grassland in the caldera. Here they have everything they need, January through December.

Professor W. Roy Siegfried of the University of Cape Town has spent most of his career examining what cattle egrets eat, how they regulate their body temperatures, how they moult and how they die. In recent years Siegfried has turned his attention to the large picture: how and why a bird of fixed habits suddenly was overcome with a great ambition to populate the world. Certain parts of the world were colonized almost simultaneously by the cattle egret. Madagascar, Cape Province and many of the extremities of Africa saw their first cattle egret in the 1930s, about the same time the bird was making its move through South America. In 1948 the Asiatic subspecies began to migrate southeast via the Moluccas and New Guinea into Australia, in synchrony with the African bird's early appearance in North America and southern Europe. Today, every continent but Antarctica is host to the cattle egret (p.61).

Siegfried believes the cattle egret evolved in Central Africa where it lives cooperatively with the Cape buffalo. The preferred habitat of both animals is the short-grass margins of freshwater wetlands. We can imagine, thereby, a world of dry seasons and wet seasons during which both host and bird advance and recede with the waters. In these freshly irrigated lands the buffalo encounters his best grazing and the cattle egret its most plentiful supply of insects and frogs.

Siegfried argues that if the cattle egret's food supply is abundant, it will normally produce three hatchlings per breeding pair. This success rate leads to a hefty oversupply of birds who instinctively fly away. "While large-scale, long-distance dispersal of cattle egrets presumably has always occurred, it is only recently that suitable habitat has been created artificially in many areas that formerly were unsuitable." These flights appear aimless. Often juveniles are spotted a thousand miles from land, bound for an empty sea. One can only guess at the number that never make landfall.

Siegfried believes that if indeed the cattle egret arrived in the New World without human assistance, it is reasonable to assume that it made many epic odysseys prior to the one that led to its effective dispersion. What signals the bird's success in the New World is not the flight, but the discovery of suitable habitat.

Now cattle have been in the Americas since the 16th century, but Siegfried does not believe that they are key to the habitat needs of the cattle egret. Nor can the North American bison be considered the ecological counterpart of the African Cape buffalo. The cattle egret was looking for something else.

Only in this century, says Siegfried, was this wanderer able to find it. River impoundments, irrigation schemes and intensive livestock production have redesigned the look, the landscape, of our continent. By controlling the flow of water to croplands we have doubled, sometimes trebled, farm production. In doing so we have increased the insect yield. Artificially, we have duplicated the wet and dry seasons of central Africa and caused our land, by pure misadventure, to be habitable by a total stranger.

Siegfried halts just when we want to know more. Can we assume that because the Americas were colonized by a strain of cattle egrets that owed their success to long-distance travel, they therefore possess in their genetic material the adaptation of migrating great distances in search of seasonal food supplies? Have the cattle egrets of Africa always dispersed? Or could an ecological shock once have propelled them toward a new continent? We do not know.

The object of such mystery and romance is an unlikely bird. Elegantly plumed, insatiably hungry, never still, the cattle egret arrived here unannounced and has crept into our lives with stealth. When we consider its unstoppable progress, curious adaptations and epic success, we learn, ultimately, as much about how we have changed the landscape as we do about this overachieving bird.

Part of a cattle egret baby boom, two-week-old chick calls for more food. It is already 70 percent grown.

The American Express® Card:

Gucci

"Everywhere...one is surrounded by elegance". –*In World Guide: New York*

TRAVEL RELATED SERVICES

©1987 American Express Travel Related Services Company, Inc

the best way to suit yourself.

Eddie Bauer

"Has everything to outfit you for the great outdoors." –*In World Guide: Los Angeles, San Francisco*

Whether it's crepe de Chine or khakis, it has to be the best. As a Cardmember, that's just what you expect. And at the more than 1.8 million places that welcome the Card, that's exactly what you'll find. Because at American Express, we're as particular about who accepts the Card as we are about who carries it. Membership Has Its Privileges℠.

Don't leave home without it.®

By Jon Cohen

'Gone up North, Gone out West, Gone!'

A startling exhibit takes visitors on the Great Migration of a million black Americans during 1915-40 in their search for a better life

Two middle-aged black men are standing in front of a re-created 1920s Virginia train station. There are separate side-by-side entrances for "colored" and "white." One of the men walks under the "colored" sign, turns, puts his arms akimbo and says to the other, "Take my picture right here. This is *our* door." "You've got that right," replies his friend, snapping the shot.

The train station is part of a new exhibition at the Smithsonian's National Museum of American History that reveals the little-known story of the Great Migration, the exodus from the South to the North made by more than a million American blacks between 1915 and 1940. And the two visitors have reacted just as Spencer Crew, the show's curator, had intended: they have placed themselves squarely into this chapter of American history.

The exhibit, "Field to Factory: Afro-American Migration, 1915-1940," is not about American science or technology or famous figures from our history, familiar themes to Washington's museumgoers. This exhibition offers sights and sounds that are new to many who might be more accustomed to viewing First Ladies' gowns, postal-pouch locks, Wedgwood china, Joe Louis' gloves, atom smashers and Thomas A. Edison's phonograph. This is a show about people, not things: American black people. Crew's goal is for the exhibition to "speak to every person who has packed up, said good-bye and headed for strange territory in search of a better life."

The few Southern blacks who could earn money for a car often packed up the family to go North together.

This photograph, used in exhibition brochure, shows migrants with all they own loaded on a Studebaker.

Mix of artifacts in the tenant farmhouse kitchen reveals that families dined, played and worked there.

Obviously this exhibit, which will run throughout March 1988 before traveling around the country, has special appeal to Afro-Americans. "By having this at the Smithsonian, we're saying that black American history is important," says Crew. "By selecting an event that occurred in the 20th century, we're also saying that recent experience—that of your grandparents or parents—is important."

To Crew, the Great Migration embodies the great American pioneer spirit. "But I don't think we very often use that term to describe the black migration," he says. "It doesn't bring up the image of going West, crossing the Rocky Mountains or through the Donner Pass—this migration was lower key, though no less dramatic for the people who made the journey. We're just beginning to understand the difficulties involved, how people's lives were changed and its effect on American society. It had a tremendous impact."

"Field to Factory" does not use the same language as many museum shows. It accents people rather than objects. It tells a story with a beginning, a middle and an end. It creates tense, even uncomfortable tableaus. It pounds in ideas without being didactic. And rather than summing up a historical event, it pushes its visitors to ask questions.

Over the past four years, hundreds of people have helped Spencer Crew bring the story of the Great Migration to life, yet there is one person with whom he shares the title of creator: designer James Sims. Crew is black and from Ohio; Sims is white and from California. Their backgrounds dovetail neatly. Both went to college in the 1960s—Crew is 38, Sims 41. Both have previously worked as professors, Crew at the University of Maryland Baltimore County (American and Afro-American history), Sims at the University of California, San Diego (stage design). Both shifted into the museum world during the early '80s.

Crew and Sims began working on "Field to Factory"

Writer Jon Cohen is an associate editor with Washington, D.C.'s City Paper. *He spent four months following this exhibition's progress.*

Curator Spencer Crew searched his own past to help better understand impact of the Great Migration.

Many families chose to stay in the South because of their close ties to friends, church and community.

in December 1985, along with project manager William Withuhn, who looked after the budget, solved deadline crunches and kept the peace within the 80-member team. "Never before had we done such a major exhibit on our nation's history from a black perspective," says Withuhn. Museum shows are put together like movies. Research leads to a script, which gets reviewed, rewritten and blessed. An artist—in this case, Sims—links with the writer, draws up a floor plan, makes some models. Finally, the script is worked onto a storyboard, coordinating visuals with text.

"To tell you the honest truth, when they sent me a designer I was very concerned," says Crew. "This is my heart and I wanted to make sure it was handled right. When Jim showed up with his design, it was so wonderful, I just fell over."

Essentially, Sims' design divides the baseball-diamond-size space into three sections: the rural South, a transition area (the train station) and the urban North. A typeset version of Crew's "Field to Factory" script is mounted on stands throughout the exhibit: "The United States has been a haven for millions of immigrants fleeing war, poverty, and discrimination, or seeking freedom," it begins. "But in some places, at some times, American society has oppressed its own people. . . ." The words are set off by more than 200 period photographs and some 200 artifacts.

At the entrance is a 1935 Chevy sedan, complete with baggage roped to the roof and a 1938 Esso road map spread across the front seat. A Langston Hughes poem called "One-Way Ticket" flanks the car:

I am fed up
With Jim Crow laws,
People who are cruel
And afraid,
Who lynch and run,
Who are scared of me
And me of them.
I pick up my life
And take it away
On a one-way ticket—
Gone up North,
Gone out West,
Gone!

In 1915, more than 75 percent of America's blacks lived in the rural South; they made up nearly one-third of the South's population. Farming was the main busi-

In re-created 1920s railway coach, the girl mannequin, first shown in exhibit hoeing a field, travels North.

ness and cotton was the main crop. Few blacks owned homes or the land they worked; typically, they sharecropped or rented.

The first part of the exhibition creates an atmosphere of the open, rural mood of the early 20th-century South. Mannequins of a mother, father and daughter are hoeing soil. At an original tenant farmhouse with a dirt yard, a grandmother mannequin is doing her laundry. A phonograph is playing in the house. Choir voices are coming from the re-created apse of a church nearby. Not only does the church represent the place of prayer, but it was also the social center, school and news bureau.

"What we try to do," says Crew, "is play back and forth on the draw of a strong community life—the church and the family in the South—against the unknown possibilities elsewhere."

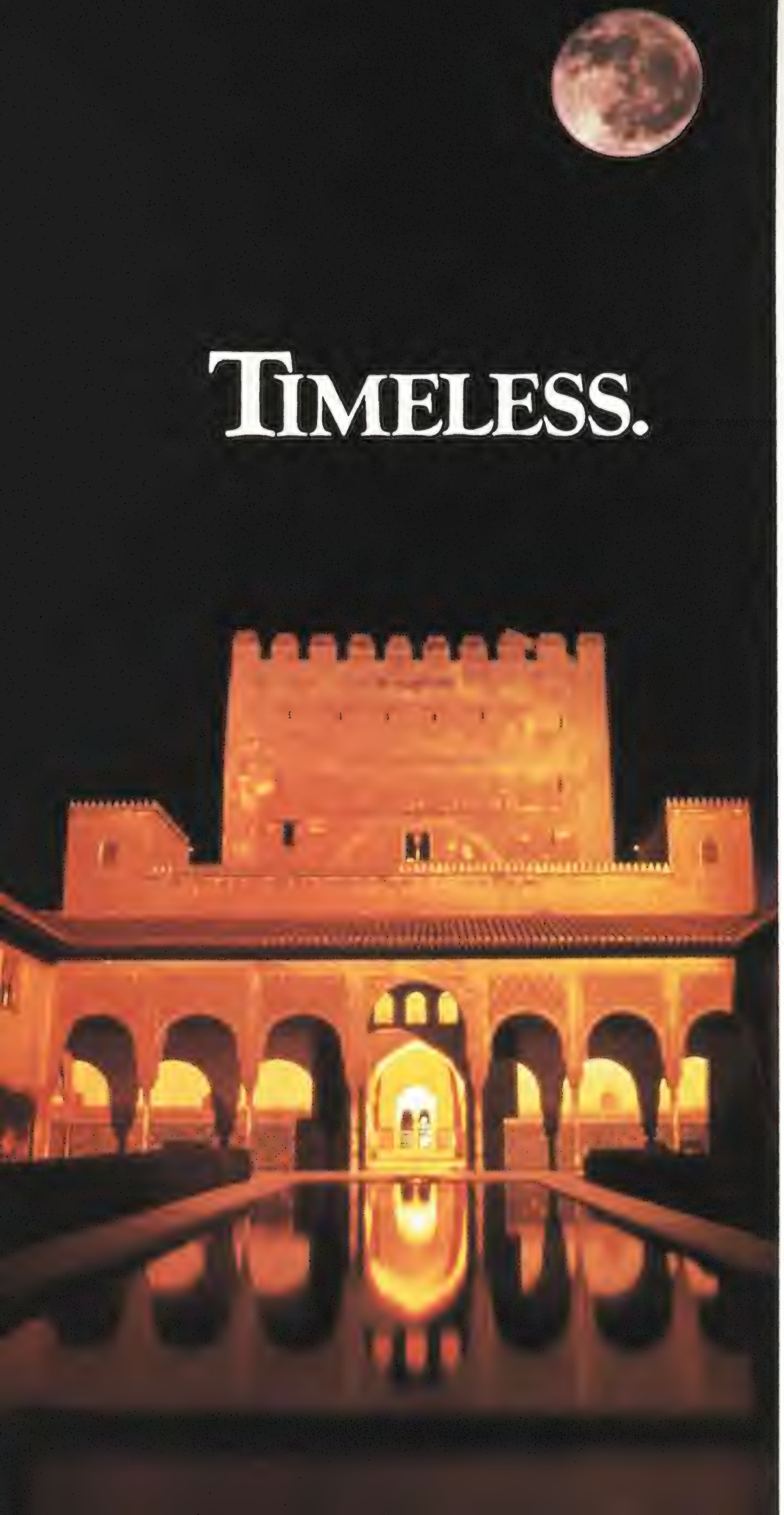
Without land, many blacks fell into debt and many sharecroppers were swindled by greedy landlords who lied about their crop profits. If a sharecropper moved to a new farm, his debt often followed him. There were incidents of landlords and local store owners stealing from Southern blacks in various credit schemes.

Jim Crow laws restricted blacks to their own restaurants, rest rooms, hotels and barbershops. Where Jim Crow laws affected publicly funded institutions such as the segregated public schools, blacks were given less money for staff and equipment. Poll taxes and literacy tests kept Southern blacks from the voting booth. And lynchings by groups like the Ku Klux Klan held back black reformers.

World War I created a labor shortage for Northern industrialists who sent recruiters to the South to hire black workers. Recruiters promised high salaries and frequently gave away train tickets to the North. Some blacks were enticed by glowing reports in Northern black newspapers and by letters of encouragement from relatives who had already uprooted. Two natural disasters, the Southern floods of 1915 and the attack of the boll weevil—a beetle that lays its eggs in the cotton seedpods called "bolls"—also encouraged farmers to put down their hoes and head North.

The decision to leave was difficult

Crew makes the point that some people, even those living in depressed conditions, choose to stay. "They don't stay because they're weak, they don't stay because they don't care, they just stay because other things are more important to them than leaving," he says. "The issue is that people have to struggle and weigh their choices. For some, it was hard to leave if the family owned property. Others may have stayed in the South to fight through the rigid segregation policies. They all had to make their own peace with their decision."



TIMELESS.

Spain is filled with ancient wonders. The Alhambra in the city of Granada. Where green pools, golden mosaics an rainbow tiles are colored with history. The city of Toledo. It wa both the home and inspiration for El Greco. Santiago de Compostela. A city that is a monument in itself From its awesome cathedral to hotel whose foundation was laid in the 15th century.

In Spain you'll also find pre historic caves, centuries of fine art and three thousand years of folklore. The list of marvels goes on and on. And so will your memories. Because whatever you see in Spain will remain wit you forever.

ESPAÑA

Spain. Everything under the su

Please send me more information about Spain

Name_____

Address_____

City_____ State_____ Zip_____

When are you planning to travel?_____

Mail to: National Tourist Office of Spain.
665 Fifth Ave., New York, NY 10022; 845 N. Michigan Ave., Chicago, IL 60611; 4800 The Galleria, 5085 Westheimer, Houston, TX 77056; 8383 Wilshire Blvd., Suite 960, Beverly Hills, CA 90211; Hypolita & St. George Sts., St. Augustine, FL 32084.

© 1987 National Tourist Office of Spain.

Like this woman, thousands of Southern blacks stayed on the road for months, following the crops.

Migratory agricultural workers trudge North Carolina highway, heading North to harvest potatoes in 1940.

For the thousands who went North, it was especially difficult to leave their families and churches, and the journey was frequently perilous. Those who traveled by car or bus met discrimination on the road, in restaurants and segregated rest rooms. Traveling on overcrowded and poorly maintained trains did not lessen the anxiety of the travelers who were leaving home for the first time.

This transition is represented in "Field to Factory" by the then segregated Ashland, Virginia, train station. It provides the launching point for the trip North. The story of three migrants is told using photographs and captions. One of them is Rufus Franklin Crew, Spencer's grandfather. Another is Lillian Reuben-McNeary, an aunt of Spencer's wife. "I haven't been shy about using family connections," says Crew. (He also used his family to cast all but one of the mannequins' faces. The little girl is his daughter, the mother is his wife and the grandmother is his mother-in-law.)

Crew says his own background had nothing to do with his initial idea for the exhibition, but that while putting the show together he was prodded to learn more about his own roots. "I had a terrific summer afternoon with my aunt talking about the family," he says. "As a young child you never get to sit down and talk about family matters. It was nice to go back as an adult and listen to my aunt tell me about her own experiences. I found a picture of my grandfather that I had never seen before, and another of an aunt who died before I was born. While searching the past of others, I found a sense of myself."

In addition to the train station with its "white" and "colored" entrances, through which visitors must pass, there is a re-created 1920s segregated day coach, with a mannequin of a sleeping black girl on one of the seats (p. 76). It is the same girl seen earlier hoeing the field with her mother and father.

Beyond the coach, in the third and final area of the exhibit, the urban North feels cluttered and the neon lights and city noises seem abrupt. Artifacts from the Traveler's Aid Society offer a hopeful sign of welcome, but a short film about the realities of the transition from South to North tempers the initial good cheer. A testimonial from a Philadelphian is posted on a wall: "They really looked pathetic, like just off the farm."

In 1919, after the initial influx of migrants, race riots broke out in Chicago; Detroit followed in 1925. Whites instituted restrictive covenants to keep blacks out of their neighborhoods. Employers of the newly arrived blacks often paid low wages and many of the industrial jobs were low-level, unchallenging and dangerous. Frequently, women could find jobs only as maids. And when the time came for firings and layoffs, blacks were often the first to go.

It's so close to infallible, we actually guarantee the pictures you take.

You've thought of getting a really good camera. But could you be sure you'd really get better pictures? The uncertainty was always there. Until now.

Now there's the Olympus OM-77AF. With its unique Great Picture Guarantee: If you take a picture that's not perfectly focused or exposed, send it to us and we'll send you a dollar. That's our guarantee—for up to 24 photos sent by August 31, 1987.

The promise is remarkable. But then, so's the camera.

Infallibly easy. The OM-77AF computer-controls everything automatically. From loading to focusing to rewinding. So you get great 35mm pictures at the touch of a button.

Infallibly precise. It's also a superb 35mm, auto focus SLR (single lens reflex). So you can change lenses, for pictures lesser cameras simply can't take.

Infallibly thoughtful. The OM-77AF is the first auto focus SLR with a built-in illuminator, for accurate auto focus in even the dimmest light. And it's the first with a built-in flash, ready to pop up whenever a great picture does.

So for all the pleasure of professional-quality 35mm pictures without the anxiety, get your OM-77AF now. And if you send us a picture not perfectly focused or exposed, we'll send you $1.

Clearly, the only mistake you can possibly make with this camera is not buying it.

Olympus OM-77AF Great Picture Guarantee: Print your name, address, and OM-77AF serial number of the camera used on the back of your imperfect (not perfectly focused or exposed) picture or on a sheet of paper attached to your slide and mail with copy of OM-77AF sales receipt to Olympus GPG, P.O. Box 1358, Medina, OH 44258. Pictures and slides will not be returned. Limit $1 per print, 24 per camera, sent by August 31, 1987. Allow 4-6 weeks for check to arrive. For full details, see your Olympus dealer or write Olympus Corporation, Dept. 177, Woodbury, NY 11797.

OLYMPUS
OM77AF

In July 1936, a Eutaw, Alabama, family laboriously hoes weeds to improve the chances of a good harvest.

Metalworker in a factory in Columbus, Ohio, found better money, but jobs were often unchallenging.

While the North was not the land of milk and honey for everyone, some Afro-Americans were moving ahead. In 1928 a Chicago black man, Oscar De Priest, was elected to the U.S. House of Representatives. Many who migrated were earning more money than they ever had in the South. New communities came together through fraternities, clubs and newly formed churches. Twice as many black children were finishing high school. Black-owned businesses prospered (the exhibit features a reconstructed beauty salon). A new urban black culture was evolving with its own literature, art and music.

Spencer Crew says the Great Migration created the first black ghettos, but, he notes, they were far different from our modern perception. "Today we think of ghettos with high crime rates, drug problems and burned-out buildings. In the beginning, though, the neighborhoods were not places of despair, but offered hope and opportunity."

On the stoop of a re-created Philadelphia row house, the mannequin of the young girl is seen one last time (p. 83). She sits reading a letter from her grandmother who stayed in the South. "City" music is heard through an open window in the row house, and on the bedroom floor is a jigsaw puzzle of the United States with only the East Coast pieces snapped into place. A question is posed on a nearby wall that asks, "Was it Worth It?"

Many of the 200 artifacts in "Field to Factory" were loaned directly to Spencer Crew. He tried to find objects with the strongest connection to those that were used and owned by Afro-Americans during the Great Migration. The problem with a show on the migrant poor is that their artifacts are hard to find. Who saves tattered clothes, broken tools and banged-up pots and pans? Crew drew on the help of the African American Museums Association, but "if they didn't have material pertinent to what I wanted, they put me in contact with local people who might. It was a process of letting everyone know what we were doing." He had to convince people that the Smithsonian would return their treasures and that the museum cared. "If people held on to objects, they must have had some sort of tangible or intangible importance. I had to assure them that I shared the same love for their heirlooms."

Crew tells the story about trying to get a uniform from a former domestic. "We were very close to closing negotiations and then a relative told of reading about someone local being given a lot of money for what he thought were similar artifacts." The man decided that if the Smithsonian wanted his relative's old shoes, housedress and apron, it would have to pay what he thought was the going rate—about $10,000. Says Crew, "I swallowed and told him, 'I'm sorry that you've come to that decision, but we can't accommodate that.' "

In early 1988, a smaller "Field to Factory" will begin a three-year journey around the country. Forty

A 1922 picture of brothers William and Benjamin Layton, who were members of an urban family from Richmond, Virginia, illustrates the wide economic disparity within Afro-American Southern community.

In 1940, this homeowner in Putnam County, Georgia, stayed in close touch with faraway relatives by mail.

panels will feature portions of Spencer Crew's script and a selection of about 200 photographs gathered for the show. No artifacts will go on the road.

Crew hopes that the places booking the exhibit will collect and display Afro-American objects of local origin. "When you talk about migration, you talk about mobility of people, and the one thing everyone has to make a decision about is what to keep and what to throw away," he says. "What I'm trying to do, along with a number of other people who are bringing together Afro-American history, is remind the public to save their mementos and family treasures, preserve them, give them to museums, so that when your kids come along, and your grandchildren come along, there are objects they can see, offering something concrete to tell them about their own history."

One Sunday shortly after the exhibit opened, swarms of visitors fill "Field to Factory," giving it life. Though the Smithsonian's Mall museums typically attract a largely white audience, there are many black families visiting this day, some still in their church clothes—little boys in ties and sports coats, mothers in veiled hats, natty grandfathers with fancy canes and fur-collared overcoats. Many of these families went through the Great Migration.

A father of four, whose family came to Maryland from North Carolina in the '30s, prods his four-year-old to share her thoughts. "They had hard jobs," she says after much squirming. "We have it easy."

"I see things in this show that remind me of what I've seen at my grandmother's house," says a middle-aged woman. Others label the exhibit everything from "inspiring" to "depressing." A young man whose family came from Georgia says he walked through both station entrances to see what it felt like. "I just wonder how people could treat one another like animals," he says. "What kind of people were they? You're talking about churchgoing people. What was on their minds?"

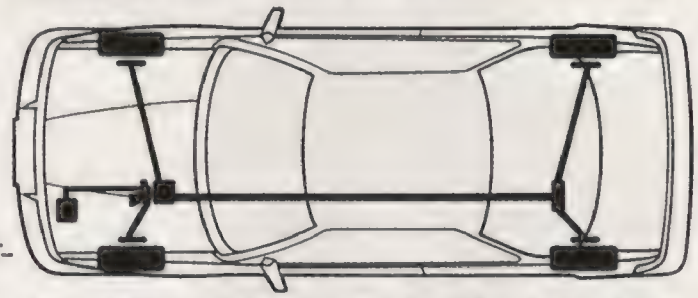
A woman about 40 who moved North from Raleigh, North Carolina, in the '60s is particularly touched. "At least it shows that we did exist in American history," she says. This woman knows what segregation feels like. She remembers not being able to use her town's public library, having to see movies at a "colored" theater and sitting in the back of the bus. "I watched whites going through this exhibit saying 'This can't be so.' Now I can't be overjoyed when in 1987 people are finally recognizing we exist and what we've been through. And this is not the full story. But it's a start," she says. "It's a real positive start."

Girl mannequin, now living in urban row house, reads letter from her grandmother who stayed in the South.

HOW TO AVOID THE EURO

In this modern day and age, there seems to be more than one European automobile manufacturer that trades on its reputation rather than its pure engineering know-how.

Granted, these autobahn autocrats produce their share of luxury cars. And yes, they do have a propensity to charge dearly for the marque. Not to mention the service.



Anti-Lock Braking (ALB) system, standard in the L option package, prevents wheel lock-up and retains steering control.

Happily, there now exists a viable alternative.

Introducing the Acura Legend sports coupe: Motor Trend Magazine's Import Car of the Year.

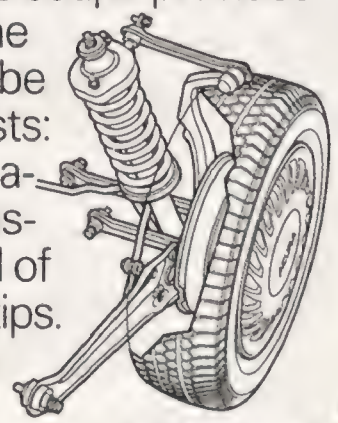
Its styling is truly classic. Its appointments, beyond reproach. Its price, starting around $22,000.*

The Legend coupe's 2.7 liter fuel injected 24-valve V-6 produces 161 horsepower.

And with a track test speed of 134 miles per hour, words like "quick" and "fast" begin to sound like mere understatement.

The Legend sports coupe provides an environment for the driver that could only be designed by enthusiasts: The white on black analog gauges remain easily and constantly within your field of vision. The controls at your fingertips.

And in our luxurious L option package, finest leather abounds. There's also a power driver's seat,



Double wishbones, both front and rear.

*Based on manufacturer's suggested retail price. Dealer price may vary. Prices exclude taxes, license, freight or options.

© 1987 American Honda Motor Co., Inc. Acura and Legend are trademarks of Honda Motor Co., Ltd.

PEAN COMMON MARKET.

a driver information center with the ability to monitor eight separate functions, and a very protective anti-theft system.

As you'd expect, the Legend sports coupe also offers handling features that make those inviting, lonely country roads take on new character, new meaning: Fully independent front and rear double wishbone suspension. Rack and pinion steering. And to prevent wheel lock-up during severe braking, Honda's own Anti-Lock Braking (ALB) system is available.

IMPORT CAR OF THE YEAR
MOTOR TREND MAGAZINE

This system also helps you to retain stability and steering control in the event of a panic stop.

The Acura Legend sports coupe. As they put it at Motor Trend Magazine, "This is the best blend of innovation, performance and fun-to-drive we have seen in almost a decade."†

With the arrival of the award-winning Acura Legend sports coupe, the European tradition is broken. Through technological innovation and stylized sophistication, it keeps you well ahead of the status quo. Both literally. And figuratively.

Test drive the new Acura Legend sports coupe exclusively at your Acura dealer.

Call us at 1-800-TO-ACURA for the location of the dealer nearest you.

ACURA
PRECISION CRAFTED AUTOMOBILES
A division of American Honda Motor Co., Inc.

†Motor Trend Magazine Import Car of the Year award ceremony 1987.

Opposite: Scrapers scoop up titanium-bearing sand in Western Australia. The same firm mines in Florida.

Some titanium shows up in stores: above, a cigarette lighter, sunglasses and a waterproof chronograph.

By James R. Chiles

Titanium: for when you care enough to use the very best

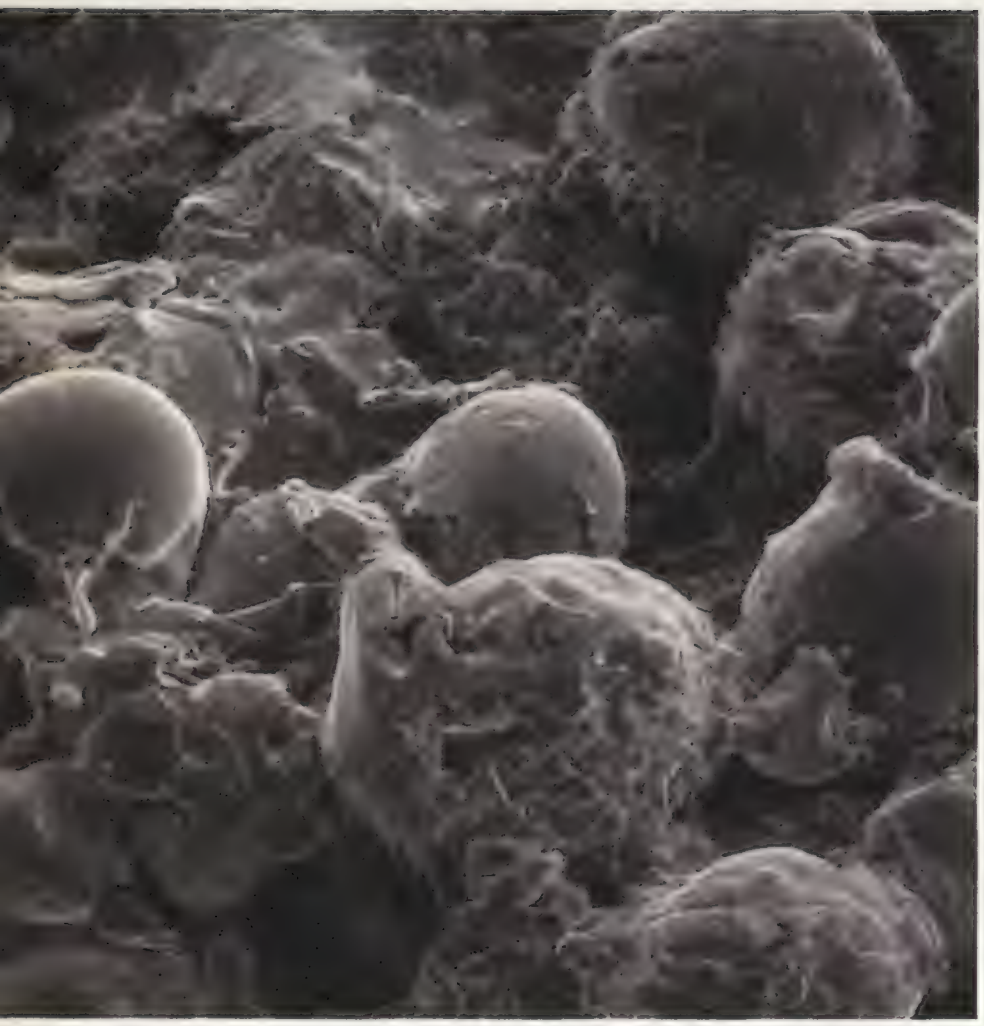
While it's tough to refine and a bear to work, this Space Age metal finds a home in the air, under the sea and in the operating room

The stuff is everywhere: in the sand on the beach, in the dirt in your backyard. Most of it is used as a common compound for everyday purposes, such as making the page in your hand opaque enough so that you do not see the printing on the other side. But some goes through a metallurgical hell of arc furnaces and leaping electrical currents to be purified into the most glamorous metal in the world today.

On Lenin Avenue in Moscow stands a 40-foot-tall statue of Yuri Gagarin, first man to orbit the Earth. It is a monument to more than the man: it is made of cast titanium, the metal without which the Space Age would never have got off the ground.

This most modern of structural metals, the fourth most abundant in the Earth's crust, begins with very old ore. I first encountered it in its raw form resting in ancient sands in northern Florida. Through thousands of years of metallurgical history—from the first cold-working of native copper, through the sculpture and spearheads of the Bronze Age and on into the ages of iron and steel—these black sands had waited. Even when chemists discovered the element almost 200 years ago in European deposits, titanium was locked in a chemical embrace so tight that no one knew how to separate it from the ore.

Photographs by Michael Freeman



Knobs, crevices seen in micrograph of titanium hip joint provide holdfasts for strong bone-to-metal bond.

Prosthetic knee and hip joints made of titanium alloy are ideal: light, strong, compatible with living tissue.

Titanium's day was coming, though. Advancing technology meant engineers were demanding more and more from the traditional metals, and finally even the best alloys were no longer good enough. Then, just as the radial aircraft engine began to give way to the turbine with its extraordinary requirements of lightness and strength, an Austrian scientist figured out how to refine titanium in an economical way. Fifty years later, we have yet to exhaust the potential of this marvelous metal.

Extracting titanium from its ore sands does require heroic measures. First, titanium-bearing sand is run through gravitational and electrostatic separators, where long, blue sparks flicker in the dark, ozone fills the air and electrons crawl on your skin. The concentrated ore is treated with chlorine to make titanium tetrachloride, a clear liquid that, when exposed to air, produces a dense white vapor long used for tracer bullets, skywriting and naval smoke screens.

Next, stainless-steel tanks are loaded with magnesium or sodium and welded shut. Titanium tetrachloride is fed into the tank through a pipe. Two days of heating and distilling yields chloride of magnesium or sodium and about eight tons of dull gray titanium "sponge," which collects on the walls of the tank like brittle fungus. After the tank cools down, workers cut it open and break out the sponge with chiphammers (p. 90). The process is hard on the tanks; one I saw was so blackened and sagging it looked like a locomotive boiler after a train wreck.

Hydraulic presses crush the sponge into huge electrodes for vacuum-arc furnaces, which consolidate and purify the metal into cylindrical ingots for shipment to manufacturers. Working the pure metal is no piece of cake, either. Years ago a trade journal commented that "trying to fabricate titanium by conventional means is like trying to catch a barracuda with a bent pin." Even today the best way to bond titanium to another metal is blast welding: lay down a sheet of the second metal, a sheet of titanium on top, and then a low, wooden box of explosives. Find a place to hide, and set off the blast, welding the sheets together.

Author James Chiles, a frequent contributor to these pages, wrote on scientific research balloons in January 1987 and counterfeiting in July 1986.

Worker grinds excess metal on hip joint. Parts can be polished; or roughed, for stronger bond to bone.

Titanium—named for the Greek giants who once ruled the Earth—is tough to make and tough to work, but for some purposes nothing else will do. Aboard the SR-71 Blackbird, the world's fastest plane (pp. 94-95), the thin titanium skin holds its strength even when Mach-3 air friction fires it to 800 degrees F. It's practically nonmagnetic, so submarines with titanium hulls can slip by magnetometers designed to pick up conventional steel-hull subs. A tough and transparent oxide layer gives the metal immunity to many acids and other corrosives that would burn holes in lesser metals.

The pure metal isn't something you'll find in the hardware store, but chemical combinations of titanium with other elements are all over the marketplace. The vast majority of the 991,000 tons of titanium metal and oxides consumed in this country in 1985 went into pigments, and also to unsung industrial uses like welding rods and additives for steelmaking.

The aerospace industry uses about three-quarters of the titanium mill products in this country. The F-15 fighter is about one-third titanium by weight, the B-1B bomber about one-quarter. The Boeing 747 uses it for massive undercarriage frames that withstand the rigors of landing. Because of its resistance to creeping when under centrifugal force, titanium is excellent for turbine blades and rotor discs in jet engines. That many modern planes can't fly without it explains why, as of 1985, the United States had 36,000 tons of raw titanium metal in its National Defense Stockpile, plus an equal amount of high-grade ores. Geologists have staked out another eight million tons of accessible titanium, mainly in New York and Florida.

The mining of titanium in Florida began by accident. George A. Pritchard and Henry H. Buckman, a pair of prospective prospectors, had found titanium ore—then worth $18 to $80 a ton—in a sample of Florida beach sand sent to them in Indianapolis. They did not have enough money to follow the lead to Florida, however, until Pritchard was injured in a streetcar accident and Buckman's car was involved in a wreck. Armed with insurance settlements of nearly $1,000, the pair reached Florida in 1915. They found the richest sand near what is now Jacksonville Beach and began mining. In 1922 the National Lead Company bought Mineral City, as the operation had come to be known, but by 1932 mining ended as richer ores were

found elsewhere. The Mineral City clubhouse became the core of a golf club and resort operation. A committee decided to choose a more appropriate name and settled on Ponte Vedra after seeing the name of the Spanish town in a newspaper dateline. When a raftload of German saboteurs left their U-boat to land on Ponte Vedra Beach in 1942, residents had already turned to tourism. Today the site is solid condominiums; the only suggestion of the old mine is the world-class golf course, artistically carved out of piles of titanium-free waste sand.

Currently America's titanium ore comes from only two mines, both near Jacksonville, Florida. Together they produce about one-twentieth of the world's supply of ore. I paid a visit to the smaller of the pair, operated by Associated Minerals (USA) Inc. The mine occupies the Green Cove Springs Deposit, a low pine-covered ridge that was prime beachfront property a half-million years ago. Beneath the shallow topsoil is sand mixed with dark organic silt, about ten yards deep. Most of the sand grains are the common quartz variety, but three percent are compounds of zircon, titanium, iron and various rare earths.

Mine manager John Glover—Australian, like his company—drove me down sandy roads to see the diggings. The operation imitates the company's previous beach mines on Australia's east coast. Working in a temporary lake, a green dredge scoops up the ancient sands with a large bucket wheel, creeping back and forth along a quarter-mile face. Hourly it passes a thousand tons of harvested sand back to a concentrating barge. The concentrator uses water flow and gravity to cull out most of the lighter, waste sand.

At the main plant, electrical and magnetic separators parcel the mineral sands into rutile, ilmenite and other metal ores. Shift supervisor Lorell Sweat led me down a narrow passage between electrostatic separators. It was like moving through a huge bug zapper. I was careful to walk down the exact center of the passageway after Sweat told me that sparks occasionally reach out into the catwalk to snap a worker. The current is just powerful enough, he said, "to make you mad at the world."

One kind of titanium ore emerging from this plant, the brownish-red variety called rutile, is excellent for making metal. For economic reasons, though, the plant's output currently goes to pigment—a much bigger market than metal. All of the titanium metal produced in this country begins with foreign ores, mostly from Australia, Canada and Sierra Leone. The refining process, which involves corrosive chemicals and high-voltage electricity, is difficult and costly, and milling and forging the reluctant metal is equally challenging: titanium cuttings try to weld themselves to tool bits, and the metal will react with practically anything when heated to melting. These accidental combinations are nearly always brittle and worthless.

Lockheed found just how difficult titanium can be when the company developed the SR-71 back in the 1960s. Some of the first parts were so brittle that they shattered if dropped to the floor. Wing panels spot-

Robert Graves

Worker uses chiphammer to remove titanium sponge (tickle ore) from inside the tank where it formed.

Not Evolutionary, Revolutionary.

Pioneer's Revolutionary Foresight System

Once you experience the glory of Pioneer's Foresight® System, you can't help but pledge your allegiance to the finest audio/video system this country has ever seen. And no wonder. Because only Foresight gives your eyes and ears the thrill of LaserVision,™ the only video format that delivers both digital sound and a video image 60% sharper than any VHS HQ in existence.

And that's just for starters. Because when you have Foresight, you have it all: easier operation due to a single "SR" system remote—three-dimensional surround sound—Pioneer's advanced audio technology—and Pioneer's 40" Projection Monitor, the best and the brightest ever made.

So if you're looking for the finest sight and sound show in America today, you have to look for your Pioneer dealer. Because no matter how exciting this ad may be, it doesn't even come close to the excitement of Foresight. For your nearest Foresight Dealer, call 1-800-421-1404.

PIONEER®

CATCH THE SPIRIT OF A TRUE PIONEER.

©1986 Pioneer Electronics (USA), Inc., Long Beach, CA LaserVision is a trademark of the LaserVision Association. Actual closed circuit picture shown.

Electric currents produce color pattern on brooch of titanium. Brush is dipped in electrolyte solution.

welded in summer failed early, while those welded in winter lasted indefinitely: it turned out there was more chlorine in the water used to wash parts in summer, and chlorine and titanium don't mix. A titanium bolt could be ruined by an assembly worker using a steel wrench plated with cadmium.

Working with titanium is a finicky business, as seen at Precision Castparts Corporation. A complex of metal buildings wedged into the residential suburbs of Portland, Oregon, PCC specializes in a small but profitable corner of the aerospace industry: titanium castings for jet engines. It uses the lost-wax process: a Sumerian bronze worker of 3,000 years ago would recognize virtually every step.

Steve Waters, titanium sales manager, walked me through the plant, explaining how to make a "fan frame" for a jumbo jet engine. (A fan frame is a set of interconnected rings about six feet across.) It begins with a hollow aluminum mold of the part to be cast. Pumps inject a special wax into the mold. The wax hardens and emerges a pale green. Workers trundle the delicate wax models down hallways to tables where other workers add other delicate wax parts and smooth out any irregularities. Each model now has a number and a dossier. Robots take over, alternately dipping the models into ceramic slurries, spraying them with sand and letting them dry. Repeated many times, this process builds up a thick shell around the wax. A trip into an oven melts out the wax and fires the mold, which will be good for exactly one titanium fan frame.

Pouring titanium into the shell requires a furnace closed to the outside air. When cool, hammers, saws and water jets strip the shell from the casting. Ready to fly? Hardly. Furnaces heat-treat the casting. Acid baths slim it. Fluorescent dyes highlight surface cracks; x rays reveal hollows inside. Inspectors write all over the casting with felt-tip pens, flagging defects for repair work. Arc welders remove surface flaws. Heat and high pressure fill interior voids. Then x rays to check the repairs. More welds. More x rays. Several months after starting life as a wax mold, the titanium part clears the shipping department. Waters showed me a fan frame that had passed all the final exams. I handled it gingerly: the price, Waters said, was "considerably over" $50,000.

The same reasons why designers are willing to pay a premium for titanium in the air apply to research in deep water. Many deep-sea submarines have pressure spheres and hulls of titanium: the French *Nautile*, the Japanese *Shinkai 2000*, and the American *Sea Cliff* and *Alvin*. *Alvin* was recently prominent as the vessel that visited the *Titanic* at 12,500 feet (SMITHSONIAN, August 1986).

The deepwater advantages have not escaped the Soviets; their "Alfa" class attack submarines have a double hull of titanium. Alfas are the deepest-diving military submarines: reportedly they can go to below 3,000 feet, versus about 2,000 for steel-hull subs.

About a quarter of the titanium milled for industry does hard labor as tubing and tanks in water desalination plants, chemical refineries, generating stations that use seawater to cool their boilers, and food processing factories. Acidic foods like orange juice will often take on a metallic taste from processing vats, but not if the vats are made from titanium.

As if titanium's combined assets of strength, light weight and corrosion resistance are not enough to earn it status as the miracle metal, then certainly the remarkable feats of nitinol, a nickel-titanium alloy, are. First developed at the U.S. Naval Ordnance Labora-

Spherical tanks of titanium alloy once held on-board fuel supplies during 1970s Skylab space missions.

From the Stouffer Collection of Side Dishes.

LINGUINI with PESTO SAUCE

Serving Suggestion:
GRILLED SWORDFISH

Swirls of *al dente* linguini. In a pesto sauce rich with basil, spinach, crunchy walnuts, and Parmesan cheese.

Delightful with grilled swordfish. Superb with chicken Cordon Bleu. It's the perfect pasta for so many dishes.

Linguini with Pesto Sauce.

Just one from Stouffer's® carefully edited collection of 15 very special Side Dishes.

© 1987 Stouffer Foods Corporation

tory in 1958, nitinol exhibits what metallurgists call the "shape memory effect": bend a wire of it into a desired shape, heat it, cool it and then straighten it. Upon reheating, the wire will rapidly twist itself back to the original configuration that was heated, exerting a force of almost 100,000 pounds per square inch.

Nitinol is already found in lightning-response fire detectors, springy wire for orthodontic braces, and weldless pipe joiners. Engineers hope to use it as the "muscles" for robotic limbs and hands. Medics think nitinol could have special uses for persons with a ballooned artery (aneurysm) or weak artery walls. A thin wire would be heated to memorize a tight, coiled shape at body temperature. After inserting the straightened wire into the artery via a tiny catheter it would recoil to form a strong, rigid lining. Even the brassiere industry is looking to replace the steel supports in its garments with nitinol so that, washing after washing, a bra will return to its original form when it hits the critical temperature—that of a warm body—for the shape memory to spring into action.

The medical community has long been a user of titanium. Eye surgeons use tiny instruments machined from titanium because "it's lighter than stainless steel and it never rusts," says Daniel Wilson, a Texas ophthalmologist. The importance of light weight is that the surgeon can work longer before his hand gives way to the tremors of fatigue. Titanium also appears in bone screws, jaw implants, the Jarvik 7 Artificial Heart, casings for heart pacemakers, implanted drug pumps and artificial joints from shoulder to ankle (pp. 88-89).

The same thin, transparent layer of oxide that protects titanium against corrosion in the human body has drawn artists with a technological bent. Using electricity or heat, it's possible to selectively thicken this oxide layer, "painting" the metal in a limited but vivid range of colors. The artist can make yellows, browns, blues, greens, pinks and purples.

I tried the electrical method in my backyard, running one wire from a transformer to a titanium plate, and the other wire to the metal ferrule on my paintbrush. I dipped the paintbrush in a jar of ammonium sulfate solution; when I touched brush to metal, the liquid in the brush tip sputtered like frying bacon, a thin vapor rose and rich colors appeared magically on the shiny gray surface. Which color I got depended on the voltage and on how long I left the brush in place.

Attention hobbyists: caution is advised. I burned out the windings in my transformer on one attempt, and severe electrical shock is only a slip of the wrist away. "I've had a couple of shocks," recalled Edward de Large, a British artist living in California. "One knocked me off a typist's chair when I inadvertently connected myself to the transformer."

Jewelry, sculpture and a few consumer items are probably as close as most people will come to the metal. Nikon offers a camera with a titanium frame, and Porsche Design sells pens, watches, sunglasses, electric shavers and lighters with titanium components (p. 87).

Still the world's fastest plane, the SR-71 Blackbird depends on its titanium skin when flying at Mach 3.

Scattered through the sports marketplaces are titanium bicycles, tennis rackets, water skis, connecting rods for racing engines, and golf clubs. Kathleen Soltow, vice president of a Michigan forging company, keeps a couple of titanium wrenches in her briefcase for demonstration purposes. "It sounds silly, but since they're noncorrodable, we think they're fabulous in marine work, or for mechanics who have to travel. A toolbox is terribly heavy."

Silly, perhaps, but many a backyard hobbyist might like a titanium crescent wrench. When he goes to retrieve it from the neighbor who borrowed it, he'll be able to point it out every time: it's the one that's supernaturally light and strong, and so rust-free it almost glows it in the dark. These virtues are why, in the 40 years since it left the furnace in quantity, titanium still shines in its high-performance aura. It's the metal that designers reach for when nothing else will do.

INTRODUCING THE TOURING SEDAN. THE DRIVING EXPERIENCE FOR THE EXPERIENCED DRIVER.

This is one car you may well want to examine from underneath, flat on your back on a mechanic's creeper. And we welcome such a critique.

The first thing you'll notice is that each wheel has its very own suspension system. With each system being totally isolated from the car body. Cornering is remarkable, with controlled heel and sway. At legal speeds, the way it handles is almost illegal.

Inside is like no Oldsmobile you've ever sat in. The ergonomic experts extended even themselves. Each seating area is genuine leather. Both front buckets adjust not only for comfort, but also for front, side and lumbar support. Every bend of your seated body will be braced for all motoring conditions.

And the driver's view is magnificent. Genuine Burl Walnut frames the car's instrumentation and information center. Here, computer signals are translated by constant monitoring of the behavior of nearly every moving part.

A Teves electronic anti-lock braking system features a sensor at each wheel that monitors speed and feeds the data to a microprocessor. In a panic situation, brake pressure corrects up to 15 times per second, providing smooth, anti-lock braking power.

The limited edition 1987 Oldsmobile Touring Sedan.

The engine is a 3.8-liter V6 with Bosch sequential port fuel injection. Electronic sensors on camshaft and crankcase determine the exact timing of fuel input, and the engine's Electronic Control Module determines the precise amount for optimum performance.

Each car is individually inspected and test driven upon completion to assure you the Touring Sedan is the essence of Oldsmobile quality. A certificate personally signed by the final inspector is delivered with each car. Further assurance is evidenced by a new 6-year/60,000-mile powertrain warranty and 6-year/100,000-mile rust-through protection warranty. See your Oldsmobile dealer for the terms and conditions of this new limited warranty.

If you desire more information on this remarkable new automobile, we'll send you a free catalog. Write to: Oldsmobile Touring Sedan Catalog, P.O. Box 14238, Lansing, Michigan 48901.

Or visit your local Olds dealer and request a test drive.

The limited edition Touring Sedan is Oldsmobile Quality in its most magnificent form.

Oldsmobile

Oldsmobile Quality. Feel it.

By Michael Parfit

They learn to work calmly while instinct warns they're about to die

At the Coast Guard's school for lifeboat skippers, heavy seas are the curriculum, fear is the text and tests are given every day

Near the cape called Disappointment, below the old gun battery on the hill where Rodman guns and mortars turned to rust and never killed a soul, the waves that bring death every year thundered on the Columbia River Bar. The shoal named Peacock, after the ten-gun sloop of war that survived Antarctica but not the mouth of the Columbia, was a maze of foam; 15-foot waves broke green and white all over an uncertain bottom made of black sand, the bones of ships and the ashes of Mount St. Helens. Here, in the two nautical miles between the north and south jetties, the contending powers of sea and river made an angry union, and inbound fishermen who had to dare the passage listened uneasily to the wail and clang of the buoys, hoped the engines were strong, tiptoed through the channel between the roar of Clatsop Spit and the blowing foam of Middle Ground, and were glad to pass under the Astoria Bridge into gentle waters.

But out in the heart of the maelstrom, three small boats played in the surf like seals. They rolled and porpoised, dashed between walls of water, vanished momentarily in spray, and rode the tops of waves, the backs of waves and, it seemed, the insides of waves. Red-clad, helmeted figures worked on each boat with apparent nonchalance as waves pummeled them with

In rough surf off Cape Disappointment, Washington, coxswains ride a 44-foot lifeboat through white water.

Starboard bow of boat on drills bashes into breaking wave at Clatsop Spit near mouth of Columbia River.

Photographs by Richard G. Shaw

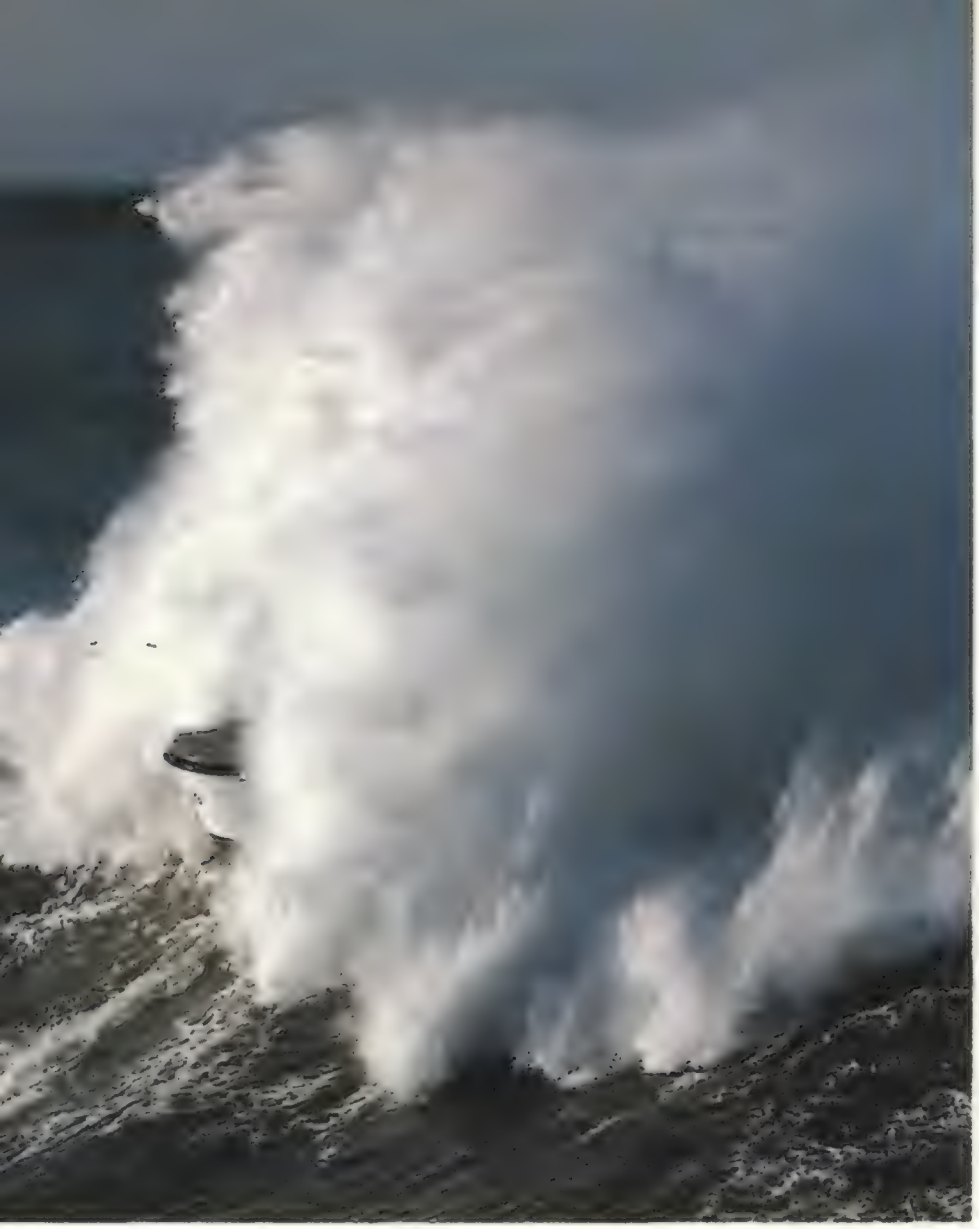
A school for lifeboat skippers

Giles Vanderhoof, first commander of lifeboat school, tested out the prototype 44-footer, Number 44300.

blows of spray. But the dance between the surf and the little boats seemed choreographed by violence. If you had stood on South Jetty and watched, you would have said: Those people do not know fear.

You would have been wrong. The boats were from the National Motor Life Boat School of Cape Disappointment, Washington, a school that exists precisely because U.S. Coast Guard coxswains, whose job as skipper of the ship demands that they often face dangerous weather, get scared just like the rest of us. Here, at one of the most consistently rough places on the coast of the United States, coxswains from all over the country, and occasionally from Canada and Great Britain as well, are intentionally taken into brutal winter weather for three weeks to learn how to work calmly while every instinct tells them they are about to die.

In the late 1950s the Coast Guard realized that it needed to replace its old 36-foot motor lifeboats because fishing boats were becoming so much larger and more difficult to tow. In 1961 it built a prototype 44-foot, self-bailing, self-righting boat that would do 14 knots on two 185-horsepower diesel engines. The Guard hoped it would also handle surf, so it picked a hot young coxswain from the West Coast named Giles Vanderhoof to find out. The boat's number was 44300; Vanderhoof knew it as *Three Hundred.* "We ran it down to Yaquina Bay," he remembers with typical



Coxswain Dennis Ramirez (right) looks for dummy in water; instructor Curtis Mauck (rear) watches him.

Meeting a breaker head-on, one lifeboat disappears in spray (foreground) as two others maneuver nearby.

test-pilot understatement, "and then we used the heavy seas there for five days."

Those heavy seas were combers up to 35 feet high. When you sit at the wheel in a 44-foot motor lifeboat, your head is about nine feet above the water's surface. The top of the mast is 20½ feet above the waterline. You lean forward. You look straight up. You see green water. Vanderhoof and his crew dressed in wet suits and life jackets and took the boat out into that nightmare world of vertical water and horizontal spray. While a 52-foot Guard lifeboat patrolled anxiously nearby, Vanderhoof spent hour after hour trying to make *Three Hundred* come apart. He ran head on into waves, he turned his back to waves and let himself be hurled. He broached. He maneuvered the boat sideways in the trough and waited for the crash. Each evening he brought the boat to the welders and engineers so they could fix it, and he picked kernels of windshield glass out of the crotch of his wet suit.

Every night the engineers would put stouter glass in the windows and tell Vanderhoof, "All right, surely this will hold," and every day he'd look up at the green insides of some wave—and boom! it would come in after him, full of glass. But the sea did more than break windows. At the end of the five days, the main cabin was crushed and holed, the aft cabin was smashed, propeller and struts had been torn loose from the hull, the engine mounts had given way and both engines were lying crooked in an engine room smeared with oil. But the boat was still afloat.

As it is today. Since that brutal test, *Three Hundred* has been rolled over six times, gone end-over-end three times, and once was rammed by a freighter; through it all, it kept its crews alive. The 105 44-footers built for the Coast Guard based on *Three Hundred* have been similarly tough. All but one, which was wrecked in Alaska, are still at work.

Although much of their job is what the sailors call "Triple-A" work—towing disabled fishermen and recreational boaters back to the dock or bringing them fuel—the 44-footers' real strength is saving lives in bad weather. In 1985, for instance, they were involved in 4,684 search-and-rescue cases and saved 602 people. But when the Guard started putting 44-footers into action in the mid-'60s, it found that the new boat was almost too capable for its people. This was an odd turn of events.

The 36-foot lifeboats required finesse from their coxswains just to get through small stuff. The new 44s could bash their way through almost anything; you could be clumsy with them and still survive. The old skills of judging and avoiding waves began to disappear, and suddenly the Coast Guard found itself with a bunch of coxswains whose rough-water technique

New students take swim in surf on first day of class. Mustang suits help them to stay relatively warm, but constant dunking in waves can cause panic. Instructors swim 100 yards every six months to remain proficient.

consisted mostly of what one student called "hope and grope." It was just like trading your old pickup for a four-wheeler that lets you go deeper and deeper into the woods until you get stuck. The coxswains plunged into the surf, looked around at what one passenger called the "magic moving mountain" and thought, "I'm not up to this." "They were afraid of themselves," Vanderhoof said.

Thus the Motor Life Boat School was created in 1968, with Vanderhoof as its first commander. Today, under the command of Chief Warrant Officer Gary Walker, it teaches about 130 elite students a year, in 11 separate classes in boat operation and supervision. The class I spent time with included coxswains from North Carolina, Oregon, New York, California, New Jersey, Delaware, Indiana, Ohio, Michigan and Texas —and a *patron d'embarcation* from Quebec.

The early days of the class I visited were anxious ones for everybody. The first day, as the boats negotiated a moderate sea on the bar, Boatswain's Mate Third Class Timothy Hardy, a 23-year-old from North Carolina who had pink cheeks and a trim, Coast Guard-issue mustache just like everyone else, looked out at the long, lethal waves and said, "I've never seen anything like this before. You might say I'm apprehensive."

You might expect, based on the movies about tough military establishments, to encounter hollering instructors and double-time full-gear marches before dawn at the Motor Life Boat School. "We'll put you under pressure and see how you react," the instructors say at the start, fitting the image. But that image soon dissolves; the instructors speak softly and call the students by their first names, and nobody marches anywhere. But the pressure is there; it's just not artificial. The sea is drill sergeant enough. It makes its own discipline; its punishment is complete.

The school's business is to forge understanding between the boat, the people and the sea. To begin with, the instructors throw everybody overboard into the surf. The winter water temperature at the Columbia's mouth is about 45 degrees F, so this is a bracing experience. It's not as bad as it sounds, however, because each student wears his standard work clothes: a wet suit, long underwear, a large, loose, insulated overall called a Mustang suit, a flotation vest, gloves and a helmet. The chilly water seeps slowly through the layers, jabbing you regularly with spears of cold, but it's not the biggest problem. The startling part of the swim

Michael Parfit, who is a regular contributor, has written recently about blackouts, Antarctica and mountain lions. He is a resident of Montana.

Announcing the most dramatic development in home dental care since the invention of the toothbrush.

Since early man invented the first toothbrush, the technique for using it has remained just as primitive. So primitive that even today, 9 out of 10 Americans end up with some form of gum disease. The problem, historically, has been how to remove plaque. The solution now comes in the form of a technological breakthrough called the INTERPLAK® Home Plaque Removal Instrument.

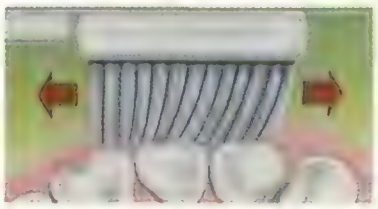
INTERPLAK cleans teeth virtually plaque-free.

Plaque is the real villain in oral hygiene. If not removed daily, its bacterial film can lead to early gum disease and tooth decay. But clinical studies have shown that manual brushing removes only some of the plaque buildup. Those same studies, on the other hand, show INTERPLAK cleans teeth and gums virtually plaque free.

How INTERPLAK cleans circles around ordinary brushing.

With manual or even electric toothbrushes, you move the bristles up and down or back and forth. But with INTERPLAK's patented design, the brush remains still while the bristles rotate. Ten tufts of bristles literally scour off plaque and stimulate your gums. And at the precise moment they reverse direction, the tufts fully extend to clean deep between teeth and under gums. Yet because the bristles are four times softer than the softest toothbrush, INTERPLAK is no more abrasive than manual brushing with toothpaste.

Each bristle rotates 4,200 times a minute and reverses direction 46 times a second.



Hand brushing's back-and-forth and up-and-down motion often misses critical areas where plaque breeds.

The counter-rotational movement of INTERPLAK tufts clean plaque from between teeth and under gum line.

Dental professionals approve.

Dentists across the country are praising the effectiveness of INTERPLAK.

"I am recommending INTERPLAK to all my patients."–Dr. L.K. Yorn, Cedar Grove, NJ

"At last, my patients enjoy using a product we recommend." –Dr. J.W. Blackman, III, Winston-Salem, NC

"Since my patients have been using INTERPLAK, I have seen a dramatic improvement in the health of their teeth and gums." –Dr. S.G. Newhart, Orthodontist, Beverly Hills, CA

"A technical breakthrough in home dental care." –Dr. A. Kushner, Chicago, IL

Ask your own dentist about the benefits of using INTERPLAK.

The future of home dental care has never looked brighter.

Each INTERPLAK Home Plaque Removal Instrument comes with two interchangeable brush heads. You can purchase additional brush heads so every family member can benefit from cleaner teeth and gums. INTERPLAK is also cordless, recharging between uses in its own stand. For information or name of a retailer near you, call toll- free **1-800-537-1600, Operator 82.**

INTERPLAK®
HOME PLAQUE REMOVAL INSTRUMENT

Interplak is Acceptable as an effective cleaning device for use as part of a program for good oral hygiene to supplement the regular professional care required for good oral health.
Council on Dental Materials, Instruments and Equipment, American Dental Association

Acceptable

©Dental Research Corporation, 1987.

is the power of the surf, which asserts absolute control over each student and deposits him or her on the black sand where it chooses. The waves rumble over you and, says instructor Dan Shipman, a man of abundant idiom, "You feel like a BB in a boxcar." This introductory adventure of the school becomes the first little test of the management of fear.

"It's a no-nonsense place," says Chief Boatswain's Mate Peter Stone, officer in charge of the Parramore Beach Coast Guard Station in Virginia, who went through two courses at the school recently. "You walk in there, they give you a test. You can't pass the test or you can't swim, you're gone. Bang!"

A slow dance at the dock

On the second day of the school a young student from Florida nearly crunched a 44-footer into a fishing boat called the *Tacora* during docking exercises. Shocked by his own errors, he stood near the wheel for an hour and a half, isolated in his mind, his face set, watching as each of his classmates led the boat through its slow dance of turn and turn and nod to the *Tacora*, while instructor Curtis Mauck said, "Sanitary. Sanitary. Good." But when the young man had another chance to embrace the big matron, she got away from him again and Mauck had to take the wheel. Not long after that the student was on a plane home.

The instructors were a diverse group. Dan Shipman filled his lectures with ripe idioms and was known as a practical joker. Curtis Mauck was crisply critical of student errors: "I want to dance on their heads; I want them to remember. We don't have time to be kind to them." Steve Bielman had a friendly smile and a talent with both boats and video equipment. Brad Steigleder was sincere and articulate; a spokesman. But all had personally studied the effects of fear. Mauck had known it intimately when he was piloting an 82-foot cutter in 75-knot winds off San Francisco, towing a damaged boat through 30-foot seas. "That was the time you gauge yourself against when you get scared later," he said once. "I was more scared then because it was badder then."

Both the C.O., Gary Walker, and instructor Dave Edwards have been swept completely off boats in bad weather. Steigleder was caught by currents while piloting a 44-footer right here on the Columbia Bar and dragged into the crisscross tumult of Peacock in the fog. "I had a 45-foot boat in tow, with seven people. All of a sudden I was in white water. I found myself close to panic. Common sense is the first thing to go."

The instructors told these sea stories to the students. Fear was a text they read from memory. "Listen to your crew," Steigleder says. "They can come up with ideas you haven't thought of." While he was stuck there in Peacock, not knowing which way to go, he had caught a glimpse of a freighter. His engineer suggested calling the big ship on the radio to get a position check. He did, and found out which way to turn to get out of the surf.

All students are already qualified coxswains. The instructors do not teach the basics of how to handle a boat. "They aren't trying to reinvent the wheel," said Peter Stone. "They're just trying to lubricate it and make it run a little smoother." Some of the exercises at the school teach extra skills in relatively calm water. The students practice righting an overturned boat in the sheltered bay near the station. They navigate across portions of the bar in both daylight and darkness. They pull a boat off the beach. Occasionally they get an informal ride in a Rigid Hull Inflatable, a small fast boat the school is testing for future Coast Guard use. But the heart of the curriculum is rough weather and surf. And it soon becomes apparent, watching the classes on land and sea, that the point of the school is not just to pass on cold knowledge—that 32 cubic feet of water weighs a ton; that a big wave travels 20 to 30 knots; that the key to survival is the aggressive but wise use of the boat's power. The purpose is also to show students the wall of fear that can suddenly bear down upon them out of nowhere, like a giant wave. Once they see it, they can learn not to hide from it but to find the way through.

So in the third week they go out into the dangerous areas of the bar called Clatsop and Middle Ground,

During rescue exercise, crewman hauls in a dummy called Oscar while coxswain holds boat between swells.

Introducing this year's hot button.

The Smith Corona XD 6500 with Word-Right® AutoSpell. Nobody has a portable with a correction system this advanced. Nobody.

If spelling and typing errors stop you cold, we've got a hot button for you. It's Smith Corona's revolutionary Word-Right® AutoSpell, and you'll find it on our XD 6500.

AutoSpell actually turns your typewriter into a thinking machine that "remembers" the spelling mistakes you make most often.

First, Spell-Right II™ alerts you to your error.

Then AutoSpell checks it against the built-in 50,000 word electronic dictionary, and brings up the correct spelling on the 16-character display, in seconds!

Sure, the XD 6500 with AutoSpell has the world's most advanced correction system. But it also has an affordable price.

Which means you can get your hands on this year's hottest button without getting burned.

SMITH CORONA™

TOMORROW'S TECHNOLOGY AT YOUR TOUCH.

For more information on this product, write to Smith Corona Corporation, 65 Locust Avenue, New Canaan, CT 06840.

Instructor Brad Steigleder takes wheel in rough water, counting on his alert crew to help spot danger.

and look up at the sea. Everyone wears a web belt considerably heavier than an airline seatbelt. The belt has two extensions, with clips on each end. Small D-rings called pad eyes are bolted to the superstructure. When you approach rough water, you clip to a pad eye. You get a grip. If you're a young coxswain from North Carolina, or a journalist from Montana, there are few experiences in life to prepare you for riding a 44-footer through a big wave. Falling off your roof might be one, or driving your car through a guard rail, over a cliff and into the river.

In a car accident, things happen quickly, too soon to think about. Out on the Columbia Bar, the sea is deliberate. The wave approaches slowly. It gives you time to think. "It's a pretty significant emotional event," Shipman says, "when you see about an 18-footer rolling at you." The wave slides under the water's tension, all energy, patient and concentrated, like a stalking green animal slipping along beneath a cover of silver. "You lose sight of land," Shipman says. "You don't see anything but water. Water and blue sky. Or transparent green when it's dumping on you. You get things like this and it is the first time they've ever broke since they were created out in the middle of nowhere. These suckers are big, broad, round turkeys, and when they break there's nothing but meat to them."

This is when a young coxswain can freeze. "I've never really pulled anybody physically out of the chair," Steve Bielman says, "but I've had them just sit there while I leaned over and drove and ran the throttles." At the moment of paralysis, when that big slow wave is finally *here* at last, things happen fast. Boom! There is a great crash and rattle. The boat lurches upward. "It's white water," Shipman says, "but you hit it and it gets dark. There's so much white water that it blocks out the sunlight. Green. It's dark green and the boat's just shaking. You hear this dull thud when you hit. And you've got it full throttle and all of a sudden you notice it's not changing and you're just going backwards. That's when you close your eyes a little."

Personally, I closed my eyes a lot. When the ship crashed, and the light dimmed, and the crew and I were thrown against the safety belts while bathtubs full of water blasted over us and the boat heeled sharply to the side, I closed my eyes and tried to recall what the 44-foot motor lifeboat manual says about the most feared maneuver of all, the rollover: "If your lower gunwale digs into the trough, prepare to roll over. . . . Take a deep breath and hang on . . . average time will be 8 to 15 sec underwater. . . . There will be damage; the boat was built to be *able* to roll over, not to like it."

The motor lifeboat can roll, come back up and keep going. The school trains people to keep going, too. After rolling, the manual says, "if the engines and boat controls are still working and there is no major hull damage . . . go ahead and complete your mission." The book, stalwart, chides you in advance for any faintheartedness, for even thinking that maybe it's time to go home and get the glass out of your wet suit. After all, it reminds you sternly, "you have to pass through the surf line again, empty or full."

Of the seven instructors at the school, all have either rolled over in a 44-footer or gone much of the way around. This is not a routine maneuver; after a 44-footer rolls, there's a repair bill of up to $3,000 for little things that broke off, like the mast and the radar dome. Boats are occasionally rolled here, said Chief Boatswain's Mate Loyd Smith, because "in order to train people you have to enter the environment, and sometimes mistakes are made." Mistakes are infrequent; the school has not rolled a boat since 1980.

"He does everything wrong"

The instructors love the camaraderie and excitement of their jobs—"I get up Mondays and can't wait to get to work," Mauck says—but they pay the price, like commodities traders and narcotics detectives, in stress and anxiety. "Oh boy, I have gone home and gotten physically sick," Steve Bielman says. "Just from being so nervous with certain people at the wheel. Big stuff, you know, and he doesn't watch behind him, he takes his power off, he does everything wrong. But you've gotta give him a chance. I usually let them go so they will get that little bit of fear: 'Jesus, next time I'm going to watch what I'm doing.' " He shook his head. "Some guys catch on quick; some should be cooks."

One of the men in the class I visited, who was much more of a coxswain than a chef, nevertheless irritated the instructors. I'll call him Johnson. "He's a show-

Chest pain you should tell your doctor about

If pain or discomfort occurs:

- at rest, or even during sleep
- at varying levels of exertion
- at specific times of the day, usually upon waking
- upon exposure to cold temperatures
- under emotional stress

It may actually be mixed angina.

Thousands of people are diagnosed every year for mixed angina—a medical problem of the heart that requires the attention of your doctor. Often the pain resembles simple heartburn, or shortness of breath, yet the consequences are not so simple. Do your heart, yourself, and your family a favor. See your doctor.

For a poster-sized reprint of this message, write: Pfizer Pharmaceuticals, P.O. Box 3852SMA, Grand Central Station, New York, NY 10163.

A message in the interest of better health from

Pfizer PHARMACEUTICALS
A PARTNER IN HEALTHCARE

boat," one instructor said. "He came here knowing everything." That seemed to be the case. "I'm not scared of anything," he told me one day on the boat. That afternoon we went out to do drills in which the students practiced rescuing a foam-and-nylon dummy named Oscar from the surf. Someone had drawn a sad face on Oscar's foam head and the words "Not Again!" The plea was in vain. Oscar went overboard time after time and endlessly survived being slugged with life rings and stabbed by the boat hook. But when Johnson took the wheel he let a wave sneak up from behind, and suddenly we were pushed around as if the boat were balsa wood. I was on the low side and here was the sea, tearing at my legs and roaring by close to my shoulders.

When you go over 90 degrees, Shipman had said, everything gets sideways. Diesel fuel spurts out through the vents in the deck and you smell it in the air. You take a breath and you wait. "I know that I've gone 90," Shipman says, "if I'm on the low side and I'm underwater. If I'm on the high side, I'm standing on the arm of the chair." Johnson's little mistake wasn't nearly that bad. I closed my eyes for only a short time. But before I opened them I could already hear Curtis Mauck dancing on Johnson's head.

"You were out of control," Mauck said. "Don't ever let yourself get out of control. Once the wave started picking you up, you didn't look behind you. You let the wave build; it picked you up, it started getting the momentum going and, man, we were surfing, we were downright surfing. Now, go back and do it again."

As the weeks went on, most students began to feel like Dennis (Ram) Ramirez, a 23-year-old coxswain from San Francisco who tied for the best seamanship award. "I'm scared of everything," he said cheerfully. "If you're not scared, something's wrong. I guess it's not so much *scared* as untrusting."

The 44-footer is so strong that some experienced coxswains enjoy charging through the waves; they come to the school like gladiators out to conquer the Columbia River Bar. "It's a letdown for some of these guys," said Steigleder. "We call them white-water freaks. They want to crash and bash all day." But anybody can go out and let the sea wash the boat, so in-

Harnessed for safety, crewmen brace as big breaker comes boiling toward them. Waves often travel slowly, allowing time to get ready, but they clobber boats with such force that major repairs are often needed.

ENJOY A RARE PLEASURE

Korbel Natural is a special champagne...rare and lovingly created. Each bottle carries a registration number on the back label to document its noble lineage from harvest to cuvée to the very bottle you pour.

Bottle № C 768532

Enjoy one of our Registered Release Champagnes: Korbel Natural, Blanc de Blancs or Blanc de Noirs. Share one with someone special...very special!

Uncork the magic!®

METHODE CHAMPENOISE
KORBEL NATURAL
CALIFORNIA
Champagne
Extremely Dry

ALCOHOL 12½% BY VOL.
AND BOTTLED BY
KORBEL and BROS. Inc., GUERNEVILLE, SONOMA CO., CALIFORNIA

Mike Berg polishes big diesels in lifeboat engine room. Reliable power is essential to rescue work in the surf.

structors stress wave avoidance. "The thing is," Vanderhoof said, "to try to go out in these conditions and keep your decks dry."

For Peter Stone, who attended the class in 1985 after 22 years in the Coast Guard, this was a revelation. "When I first went to the school I said, 'Phooey, this is a bunch of garbage.' I went out there and realized that in the old days we did it wrong and it's damned lucky none of us got killed. Made a believer out of me." Stone now sends his coxswains to Cape D and practices wave avoidance with his crews in the short, sharp surf on the bar of Wachapreague Inlet. "The waves are closer together here," he said. "But the principle's the same. A breaker's a breaker."

At the end of the school the students go back to their stations. The school gives them no extra formal qualifications, except for a section in their file that reports how they performed, but for some it will be a foundation for the rating of "Surfman." This prestigious qualification is earned through experience in rough water—far more than you get in a three-week school. "Surfman," Curtis Mauck says, "means when somebody has to go out, you're the winner. You get the longest, coldest, most miserable duty. It's an honor."

Before they go home, the students get a good long taste of miserable duty. During the third week of the school they spend every day in the breakers. Not *again*! Morning and afternoon they chuck Oscar into the waves and pick him up. The voice of the instructor becomes a litany: "Watch all around you. Make your turn. Keep it hard over, watch the middle, bring it around, back it off, bring it to idle. *All* the way to idle, because if you don't you'll be right up onto the person. If you bring 19 tons down on him, that could ruin his whole day. [Boom! Splash! There goes another wave!] Look behind you for the low side of the wave to make your turn. Use your power, use your power. Hang on! [Roar! Boom! Splash!] Very nice. Sanitary. What you do here is what you'll do in real life, so just make it a habit. Now, if Oscar's on the low side of the wave, you're going to have to turn and take the high side and eat it, because he—*he*—is why you're out here."

"There is a certain amount of seriousness in operating these boats in this kind of weather," said Chief Smith, who is head of instruction. The seriousness is not in the wild water or the machine or the people. It's the clown in the water: Oscar. People who operate 44-foot motor lifeboats are there to save lives. Their frequent triumphs are celebrated by medals and *Reader's Digest* stories and a lot of prose about heroism that embarrasses the participants. But their few failures are attended by a silence that never stops whispering.

Before the school was started, in the 1960s, a coxswain had turned back, afraid of eight-foot waves, and the people he abandoned had died; Vanderhoof remembered it still. This was a different kind of concern. "I personally do not want to take the chance of having something on my conscience," said Curtis Mauck, "where my inability to make the right move hurt somebody." That's why attention in the classes never strayed. Everybody knew that someday on a boat just like this one, the waves would be just as green and powerful, but the silly bobbing head of Oscar would instead be a face suffused with its own fear, looking up to you for life.

One afternoon I walked up to the school buildings from the dock with Giles Vanderhoof, who is now retired. Since the school started, he had said earlier, coxswains, more confident now, had been reenlisting more frequently. "What did they enjoy about the work?" I asked him. I thought he'd talk about the fun of bashing through surf. He smiled wryly.

"Lots of times it isn't enjoyable," he said. "Lots of times it's tremendously miserable. You know, the tremendous impact on your body. And the cold." I persisted, "These guys are reupping to do it some more."

"Mainly it's what you're *doing*," he said. "It's when you pull a little six-year-old girl out of the water who's basically dead, and in a few minutes you've got her breathing and bawling and barfin' and you know that you're the one that did it. You got to her and saved her. That's it probably more than anything else."

On his way to gaining a new respect for the sea,
a coxswain faces up to the ultimate reality of his job.

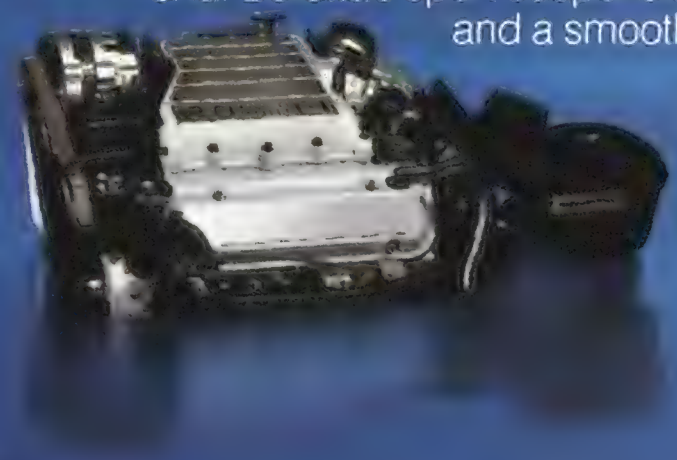
DISCOVER A

BER

THE 1988 BERETTA.
It has evolved. Not just a new car, but a new species. An unusually roomy sport coupe with a natural instinct for the road.

A DISTINCTIVE NEW SHAPE.
From nose to tail, the stylish contours of Beretta make a unique impression. Angular hood. Flush, pillar-mounted door handles. Lots of glass. Aggressive stance. And a bold tail lamp. See it on the road and you won't soon forget. Drive it, and you never will.

QUICK 2.8 LITER MULTI-PORT V6.
With the optional 2.8 Liter V6, Beretta can move from 0 to 60 in less than 10 seconds.* This refined Multi-Port Fuel Injection engine features a computer-controlled coil ignition for accurate spark performance and an electronic control module with brand-new microprocessor technology that can handle 600,000 commands per second. Beretta's sport suspension and a smooth-



NEW SPECIES

ETTA

shifting, high-torque 5-speed transaxle turn that raw power into inspired performance.

A NEW LEVEL OF INTERIOR COMFORT.
The Beretta cockpit. A world of aesthetic design. Both front bucket seats have their own suspension systems to help tune out road vibrations. Watch Beretta's vital signs come to light as you turn on the optional electronic instrumentation.

With a touch of your finger, you can even check your gas mileage or the temperature outside.

Make the road your natural habitat; put yourself in the unforgettable shape of Beretta. A new species.

*Performance figures compiled by a professional driver on a GM test track.

Let's get it together... buckle up.

GM 6/60 QUALITY COMMITMENT PLAN

See your Chevrolet dealer for terms and conditions of the new limited powertrain warranty.

THE Heartbeat OF AMERICA TODAY'S CHEVROLET

Quilting bee in early New England, romanticized in 1870s picture, involved considerable social elegance.

Modern quilting sessions like this, in Brooklyn, were inspired partly by crafts revival due to Bicentennial.

By Joseph Harriss

The newest quilt fad seems to be going like crazy

After providing warmth and sociability for frontier women for generations, quilting now has lots of cash, and cachet, as salon art

According to family legend, the earliest pieced quilt made in America was stitched in 1704 by Sarah Sedgwick Everett, wife of the Governor of the Massachusetts Bay Colony. By 1774 George Washington was buying quilts in Belvoir, Virginia, presumably to take back to Martha in Mount Vernon. As the frontier kept advancing westward, quilts kept pace. In addition to sleeping under them, homesteaders kept warm by hanging quilts over drafty doorways and windows. Worn-out quilts could be cut into strips and stuffed into the chinks of log cabins. If the money ran out, they were used to pay debts, as well as tithes to the church.

For pioneer women, isolated on the prairies, quilts were a source of special solace. Mrs. Mary Wilman, whose family moved from Missouri to West Texas in 1890, recalls the first time her mother was left alone for a week and a dust storm came up. "The wind blew for three days so hard and the air was so full of dust that she had to tie a rope around her waist to get out to feed and milk the cows. . . . She took to quilting all day every day. She used to say, 'If I hadn't had the piecing, I don't know what I would have done.' "

But pioneers would hardly recognize their old standby today, for the homely quilt has lately become a costly modern American cultural phenomenon. At the vast International Quilt Festival in Houston last fall, a visitor's first impression was one of a confusing maze of multicolored fabric that recalled the carpet souks of Fez or Marrakesh. Thousands of people sauntered through, gravely chatting about stitching and batting. Draped over frames, folded in piles, hanging like captured flags from the very ceiling, were hundreds of pieced and appliqué quilts, dazzling the eye, dampening the acoustics, ultimately boggling the mind.

Fortunately I was taken in hand by the show's director, Karey Bresenhan (p.122), a small woman with dark hair and ice-blue eyes, who startled her sophisticated friends back in 1963 by actually making a quilt for her wedding. Twelve years later she started the yearly quilt festivals in Houston. "We had 200 quilts and an attendance of about 2,500," she recalls. "Last year we had nearly 5,000 quilts and nearly 20,000 visitors. It is known as the world's fair of quilts."

As we trotted through the cavernous Albert Thomas Convention Center, past booths with names like Rasp-

Crazy quilts like this, using bizarre scraps of silk, bits of sweethearts' neckties, were radically daring in the 1880s. As a historian wrote: "Better . . . than nervous breakdowns, better than gin or patent medicines, Crazy Quilts were American women's answer to the constrictions of the Victorian age."

berry Hill Patchworks and Tomorrow's Heirlooms, I noted offers of high-tech, self-healing polymer cutting surfaces. She proudly ticked off the show's other vital statistics—17 special exhibits spread over 60,000 square feet, quilts from 25 countries, 150 exhibitors who staffed 210 booths, more than 100 lectures and workshops, and tour groups that had come from as far away as Japan and Australia.

Interest in quilting surged dramatically after the 1976 Bicentennial. Many communities, stirred by thoughts of pioneer folk art and America's past, made commemorative Bicentennial quilts, reviving the idea of the old quilting bee. The quilting renaissance was also encouraged by a strain of feminism. Legions of needle-calloused quilters now attend conferences, seminars and cloistered retreats to learn design and techniques. All across the country, quilt shows of less than world's fair size hang in banks, lobbies of big corporations, libraries and school gyms. Karey Bresenhan's experience with the American International Quilt

Foremost collector of bright, geometric Amish quilts like one at right, David Pottinger (below) runs general store in Honeyville, Indiana (pop. 50). He bought it ten years ago to be near quilts and shy quilt makers, who patronize his store.

Association has been duplicated countless times. It began with 45 members and now has 1,680.

Keeping quilters supplied with everything from fabric and frames to needles and thimbles has become a multimillion-dollar industry. Quilted fashions from wedding dresses to bikinis are presented at most big quilt shows. When couturier Ralph Lauren began buying antique quilts back in 1982 and cutting them up to make jackets, vests and skirts, the faithful were irate, fearing that quilts were soon going to become an endangered species.

With boldly colored geometrics and abstract designs, quilts came to be celebrated in the 1970s as precursors of abstract art and, with the sanction of artists and art historians, were soon being bought up and hung on walls as decoration. Like Molière's Monsieur Jourdain, who spoke prose without knowing it, American quilters found they had been unwittingly producing abstract art long before anyone had even heard of Piet Mondrian.

First official recognition of the painterly qualities in quilts came, of all places, at New York's Whitney Museum of American Art. In July 1971, on Breuer-designed walls recently vacated by an Andy Warhol show, went a 60-piece exhibit entitled "Abstract De-

The writer, who was for many years a roving editor for the Reader's Digest *in Europe, is the author of a book on the Eiffel Tower (Houghton Mifflin, 1975).*

Too pretty to get its feet wet.

Shaving by shaving, feather by feather, a wood block takes on life. The shaping of decoys has been a skill in Louisiana for as long as Cajun has been spoken. But this beauty will never flirt with a duck. Her charms are saved for the artistic, the art collector, for all the admirers of things carved by hand. We at Phillips Petroleum are captivated, too. We try to take as much care when the work we do touches the habitats of wildfowl, as these artists take with their birds. To every last feather.

PHILLIPS 66

Patriotic Bicentennial quilt (right) hangs in a booth at Houston show. Above, 1849 Baltimore Album quilt—and ones like it—is worth thousands today.

Bright, playful posterish Ark and Doves was done by Harriett McDavid Russell at start of the Civil War.

sign in American Quilts." It was the first time that a major museum had hung quilts as art rather than needlework. The Whitney quilts came from Jonathan Holstein and Gail van der Hoof, private collectors from New York City, who for several years had been collecting quilts not as craft objects but because of their graphic appeal. Holstein remembers proposing to the Whitney, which had some young, daring curators, "an exhibit of quilts as art, to be chosen solely on the basis of how they worked as paintings."

Reading the reaction of the 1971 New York art world today, you can almost hear the scales falling from critical eyes. Said the *New Yorker*: "The lesson . . . is that a quilt that looks merely homey lying at the foot of a bed may become a great work of abstract design when it is hung on an enormous white wall and regarded from a distance." *New York* magazine gushed about "positively breathtaking sophistication." Hilton Kramer in the *New York Times* spoke of "a stunning revelation." The "anonymous quilt makers of the American provinces," he declared, had "created a remarkable succession of visual masterpieces." The show later traveled coast to coast before heading for Paris, Lausanne, Brussels, Amsterdam and, finally, to the Smithsonian's Renwick Gallery in Washington.

The phenomenon is still working its way through the nation's curatorial consciousness. The Los Angeles County Museum of Art (LACMA) is busy putting together a big quilt collection. The Museum of Ameri-

How to ask for the perfect television.

I want a 27" with black matrix, high contrast ratio, 400 lines of resolution, computer accurate digital access tuning, 178-channel capability, stereo decoder, wireless remote control . . .
Simulated TV Picture

Or just ask for a Magnavox.

That way you don't need a high-tech vocabulary to get everything a perfect television ought to have, everything the Magnavox Star TV has.

It's a technological masterpiece that translates into picture quality so fine in detail, so color-true that it approaches real life.

An incredible array of functions including on-screen graphics, channel captioning, and a permanent parental control to restrict certain channels from children, makes the Star TV even more beautiful to watch.

And this TV comes with the incredible Universal Remote Control–so advanced it controls virtually every brand of wireless VCR or cable system.

The Star TV from Magnavox. It's a lot of television in any language.

The perfect picture. The perfect remote.

Nobody puts it together like MAGNAVOX.

©1986 N.A.P. Consumer Electronics Corp A North American Philips Company

can Folk Art is devoting a large part of its new building, opening on 53rd Street in New York, to its 200-piece quilt collection. And until June 7, the Renwick Gallery is showing a striking exhibit entitled "Quilts from the Indiana Amish."

Because of superb craftsmanship and stunning visual impact, it is possible to think of Amish quilts as the Gobelins tapestries of quilting. The best of them made between 1875 and 1940, Amish quilts (p. 116) come in two basic styles: bold Pennsylvania designs, most typically from the area around Lancaster, with broad, simple squares and bars of rich reds, blues, purples and greens; and smaller, more complex patterns from Midwestern communities, often with bright colors like yellow or pink against a black or navy background. Both styles illustrate a close visual relationship between modern abstract art and traditional quilt design.

Stitching along a pattern line is painstaking work, especially for experts who manage 20 stitches an inch.

The 20 quilts being shown at the Renwick come from the collection of David Pottinger, who in 1977 abandoned his Detroit plastics firm and moved to the Amish village of Honeyville (pop. 50) in northeastern Indiana. He bought an abandoned country store with living quarters at the rear, stocked it with hardware, groceries, cookware, shoes, hats, fabric and notions, then settled in to find quilts.

Visiting him at the store, I was able to measure his remarkable success, which involved fitting in with the shy and taciturn Amish. Customers, arriving in closed, black, one-horse Amish buggies, seemed very much at home in his store. Pottinger mussed the hair of the children and joked with the black-bonneted women as he filled orders for bolts of cloth and groceries. Others came to use the store's telephone—Amish rule forbids electricity or telephones at home—neatly signing their names and the number called so their bill can be drawn up at the end of the month. Next to a freezer was a sign: "Drop ice cream money here." The honor system still works in Honeyville.

When not minding the store, Pottinger was knocking on doors, sitting in living rooms and talking quilts. After a while, the wife often brought out one or two for his appraisal, which he performed in what to the Amish was the outlandish fashion of having the quilt held up vertically and regarding it from across the room. "I couldn't care less about how many stitches to the inch there were," he explains. "I was looking for the graphics." Over the years he bought most of what was offered, some 700 quilts altogether. He always made a point of getting the quilt's history, indicating on a tag when and where it was made, and by whom. Such detailed documentation is virtually unique in a large collection. In the quilt world it is almost as highly prized as the signature on a Boulle commode or Gallé vase.

First culcita, *then* cuilte, *then* quilt

The quilts in the Renwick show, chosen by curator Michael Monroe, reflect the museum's recently affirmed intention of concentrating on American crafts. "This show fits in perfectly with our new orientation," Monroe says. "These quilts are examples of extraordinary design and exquisite craftsmanship."

That American quilts should be regarded as modern art is only the latest, and perhaps most ironic, of their vicissitudes. The word quilt derives from the Latin *culcita*, a stuffed sack or cushion, via Old French *cuilte*. Quilts are much older than the American frontier. The quilting technique—the stitching together of two

layers of fabric with a soft stuffing between—goes back at least to ancient Egypt. In the 1100s the Crusaders found that the quilted shirts they discovered in the Near East made chain mail more comfortable.

An inventory from Wales in 1551 lists "In the New Chamber over ye Garden . . . Item a quylte of redd sylke in the Nursery." Historical study of quilts has only recently begun, led by LACMA, which has just established a quilt research center with its own library, exhibition space and conservation specialists. Quilt history currently is a curious blend of fact and fiction. Legends abound: it has been said that Mary, Queen of Scots quilted to pass the time during her imprisonment in England, and Marie Antoinette's elaborate wedding quilt scandalized French Revolutionaries because it reportedly took "100 good women" eight years to make. In parts of America, tradition required a young girl to have 13 quilts as part of her dowry. Thus the old quatrain "At your quilting, maids, don't dally,/ Quilt quick, if you would marry,/ A maid who is quiltless at 21,/ Never shall greet her bridal sun!"

Quilt or baby—nine months each

Quick or not, quilting technique has changed little over time: the saying is that, at about nine months, it takes as long to make a quilt as to make a baby. A quilt starts out as two layers, with a soft padding, or batting, between. This fabric sandwich is spread over a wooden frame to keep it from shifting while being stitched together. Using simple running stitches—the best quilters can do 20 to the inch—and keeping one hand under the quilt, the quilt maker pushes the needle through from above until it grazes the tip of the index finger beneath. After a while, experienced quilters develop a calloused fingertip.

There are several kinds of traditional quilt tops: most familiar are "pieced," now sometimes known as "patchwork," and "appliqué." The top of a pieced quilt is created by sewing together cut pieces of fabric to form an overall pattern. For a period of about 30 years, roughly from 1880 to 1910, pieced quilting sometimes deviated from rigid balanced geometrics to form "crazy" quilts for use not only as bed coverings but as throws over sofas and chairs. Crazy quilts—named for the bizarre appearance of irregularly shaped pieces—often incorporated such personal keepsakes as cherished hair ribbons, bits of wedding dresses, even men's discarded neckties. Another technique that can be the most beautiful of all is known as "stuffed-work," or sometimes "trapunto," made from two single sheets of fabric stitched together in elaborate design and stuffed to create a raised pattern. When I asked Robert Bishop, director of the Museum of American Folk Art, what the Hope Diamond of quilts is, he unhesitatingly

Fair Grounds, the "Hope Diamond of quilts," made in 1856, now at the Smithsonian, looks like bas-relief.

Soviet-American quilt, by women of both countries, includes portraits of Russian and American children.

Founder of Houston festival, Karey Bresenhan has seen entries increase from 200 to 5,000 quilts since 1975.

named Fair Grounds, a stuffed quilt created in Kentucky in 1856 and now at the Smithsonian's National Museum of American History.

In appliqué, pieces of fabric are sewn onto a background. Once they are in place, the background areas are then decoratively stitched. Because the pieces applied to it are usually cut into stylized motifs like leaves, stars, hearts, flowers—or everyday objects such as houses, horses and fire engines—appliqué quilts are usually pictorial in design. The 40 or 50 exquisite Baltimore Album appliqué quilts (p.118), made in the 1840s and '50s with intricate floral arrangements and neat bright colors, are considered by many as the epitome of American quilt-making skill.

Quilt patterns are sometimes given whimsical titles. Country living predictably inspires names like Corn and Beans, Melon Patch, Wild Goose Chase, Sunbonnet Sue. But genteel city life is evoked in Milady's Fan, Tangled Garters and Dresden Plate. And plenty of historic and political themes surface, too: Whig Defeat, Burgoyne Surrounded, Lincoln's Platform and Sherman's March.

Two oral historians, Patricia Cooper and Norma Bradley Buferd, authors of *The Quilters*, have found that quilts are emblematic of the lives of pioneer women in Texas and New Mexico. "The quilts represent an all-inclusive portrait of these women," they write, "an artistic expression of their selves and their whole experience." The long, slow creation of a quilt could even serve as a metaphor for life itself. One woman explained to Cooper and Buferd: "You're just given so much to work with in a life and you have to do the best you can with what you got. That's what piecing is. . . . Your fate." *The Quilters* was turned into a successful musical in 1982 by Molly Newman and Barbara Damashek. Using quilts as set and symbols, it went on to win a prize at the 1983 Edinburgh Festival and later played off-Broadway in New York.

Clearly, quilting meant a lot to frontier women. As one elderly quilter recalls, "In the summers we'd put up the frame on the screened porch and when the work was done, Mama would say, 'OK, girls, let's go to it.' That was the signal for good times and laughin'. . . . Sometimes you'd quilt and visit till midnight by lamplight with the bugs battin' against the screen." At times, these wanton female frolics worried the menfolk, as witness Professor George Whipple of Oberlin College, circa 1839, who cautioned that quiltings could be unhealthful. They were, Whipple wrote, "a source of great joyousness," but there was also "some extraordinary eating and drinking"—a quilt orgy, in sum. The professor reported solemnly that at one quilting an excited young woman had convulsions and died from "drinking strong tea rapidly."

During the Civil War, women made quilts for Union and Confederate soldiers. The ladies of Westport, New York, for instance, signed their names in the blocks of one for the soldiers of the town's Company A, which fought at Antietam, Gettysburg and Richmond. The quilt fared better than most of Company A; at war's end, the unit's three remaining survivors returned it to Westport.

In World War II, funds raised by quilting circles helped buy at least one bomber. In Idaho, women determined to do something about East-West tensions began the Boise Peace Quilt Project in 1981. A first quilt was delivered in May 1982 to the bemused Soviet cultural affairs attaché in Washington, who sent it to the Soviet Women's Committee in Moscow. The project lately has produced additional activist quilts, including the National Peace Quilt, which is composed of squares from all 50 states. It is being circulated among U.S. Senators, 68 of whom have accepted the invitation to sleep beneath it.

Art or "student-level design experiments"?

During last year's centennial of the Statue of Liberty (SMITHSONIAN, June 1986), quilting was there in the form of the Great American Quilt Festival, which attracted 25,000 visitors to Pier 92 in New York City. To the hearty approbation of these huddled masses, a nationwide contest for a commemorative quilt was won by California stitcher Moneca Calvert with an appliqué portrait of the Statue with mountains, plains, the flag and the New York skyline.

Quilting seems poised for yet further permutations. Is something called TRIX, made by direct application

The Volvo 740 is built and engineered to withstand the kind of scrutiny one would expect from a person who has learned a thing or two about value.

In fact, no car is built to be looked at more carefully.

Which explains why so many people who look at other European imports end up with a Volvo in front of their house.

VOLVO

A car you can believe in.

© 1987 Volvo North America Corporation

THE SECOND LARGEST PURCHASE OF YOUR LIFE SHOULD BE AS CAREFULLY CHOSEN AS YOUR FIRST.

Olivia in a Blue Hat, by Alice Neel and Chris Wolf Edmonds, shows collaboration of painter and quilter.

of textile pigments on cotton and cheesecloth, a quilt? For that matter, is someone a quilter who explains that his creation "deals with trying to control and manipulate the various aspects of life"? How well would Sunbonnet Sue sleep under a covering called Coming Unglued, quilted with metallic thread and said to be "a statement about sanity and how the mind begins to fragment when disruption occurs"? "I think that many quilts labeled as 'art' are actually student-level design experiments," says Penny McMorris, quilt historian and coauthor of *The Art Quilt*. But, McMorris insists, there is a growing body of work that is "knocking critical socks off."

These are the new art quilts, made by studio quilt artists, many of them also potters, graphic designers and printmakers. In addition to calico and log cabin strips, they are working with assemblages of paper fabric, metal, paint, wood, beads, found objects, silkscreening and color xerography. The quilts they turn out are always original, often provocative, occasionally beautiful.

Already the art quilt appears to be snubbing its country cousin by having its own exclusive show. Two years ago, the biannual Quilt National, held in Athens, Ohio, drew more than 900 works from 400 art quilters in 44 states and eight countries. More of everything is expected at the next one, being held this June 6 to July 5. A determined lack of inhibition appears to be the main thing the show's works have in common. Hilary Fletcher, coordinator of the show, is circumspect in defining them. "Nearly all of the works will be pieces of fabric that are combined, layered and bound together by stitches," she says. "They are quilts by structure, not by function." That should cover quilts with titles as bewildering and diverse as Hermeneutics, Astral Macaroni with Blueberry Vinaigrette, and Windfalls of My Mind.

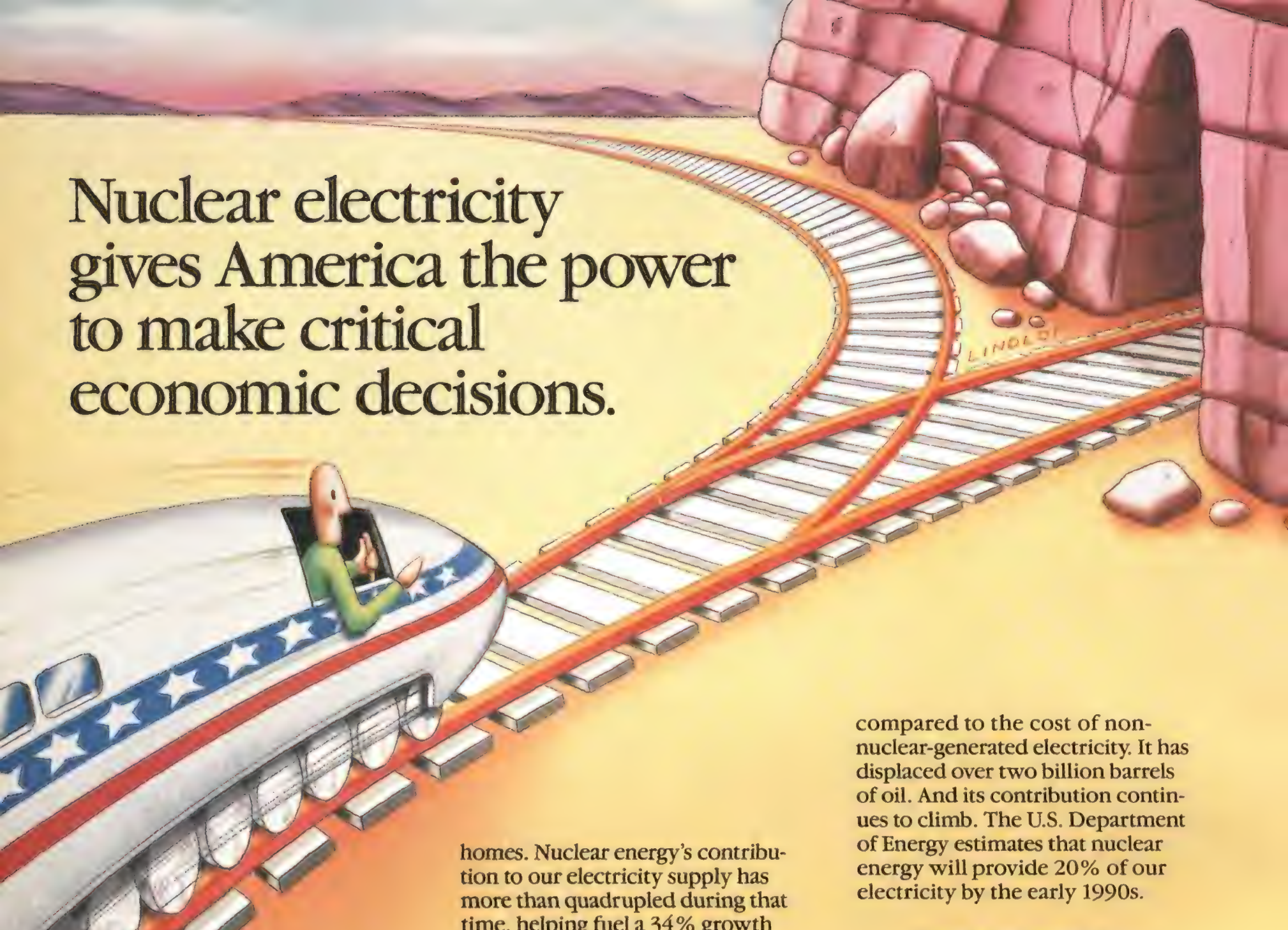
Eighteen years ago when furniture dealers used quilts to protect dinner tables from scratches, it was not unusual to find splendid examples for $50. But when a decoy duck sells at auction for $314,000 and a needlework sampler for $121,000, can quilts be far behind? Today the same items would cost $500 or more. Pre-1940 Amish quilts are approaching $10,000 and are being snapped up by private collectors, interior decorators and even corporations. Dealers Joel and Kate Kopp, who own the America Hurrah folk art shop in New York, have been in on the boom from the beginning. "When we started in 1968, our price range was $10 to $65," Joel told me when I visited their Manhattan store. "Now we have moved here to Madison Avenue after 14 years on 70th Street and our average quilt is $500 to $1,000." The Kopps also sold two quilts for $42,000—each—which was a record until this January, when Sotheby's auctioned a Baltimore Album quilt for $176,000.

Thus the days are probably over when you could go ride out into the country of a Sunday and pick up a great quilt for next to nothing. But this seems unlikely to discourage today's new breed of quilt lovers. "I've never met a quilt I didn't like," declares Ardis James, a collector from the New York suburbs. She and her husband, Robert, are now adding a new room to their house, complete with low light level and controlled humidity and temperature, where they can display their 200 quilts.

As Joel Kopp explains, "When there's something there that makes the quilt unique as an expression of an individual heart and mind, it just blows you away."

Angela Jacobi's trompe l'oeil quilt of Ellen Lanyon's painting uses layers to enhance rolled-back effect.

Nuclear electricity gives America the power to make critical economic decisions.



The 1973 Arab oil embargo gave America its first bitter taste of foreign oil dependence. To protect our economy, we turned to electricity. Using American resources and technology. As a result, nuclear energy has established itself as a cornerstone in rebuilding a strong economy.

The electrification of America

Electricity is the only major form of energy that has experienced overall growth since 1973. We are using 36% more now than we did then. It serves new uses in our factories and heats twice as many of our homes. Nuclear energy's contribution to our electricity supply has more than quadrupled during that time, helping fuel a 34% growth in America's economy.

There are still no guarantees against becoming too dependent on foreign oil once again. Our economy continues to require increasing amounts of electricity for its growth. And that electricity must continue to come from nuclear energy, as well as coal and other domestic sources.

The growth of nuclear energy

American nuclear electricity was born in 1956. By 1973, it had become a technology America could turn to when faced with the oil crisis. And today, over 100 nuclear plants make nuclear energy our second leading electricity source, behind coal. In fact, nuclear energy and coal together have provided over 95% of all new electricity generated in America over the past decade.

Nuclear energy also saved Americans between 35 and 62 billion dollars from 1974 to 1985, compared to the cost of non-nuclear-generated electricity. It has displaced over two billion barrels of oil. And its contribution continues to climb. The U.S. Department of Energy estimates that nuclear energy will provide 20% of our electricity by the early 1990s.

Nuclear energy for a secure future.

Nuclear energy has proven its worth to America's economy. Auburn University Dean of Engineering Dr. Lynn Weaver recently described nuclear energy as "...one of the basic props supporting the entire national economy."

Yet, in spite of all we've accomplished, the threat of foreign oil dependence remains. Difficult choices will still need to be made. But one fact has made itself very clear: the more we develop our own energy sources like nuclear energy and coal, the more we control our own economic destiny.

For a free booklet on energy independence, write to the U.S. Committee for Energy Awareness, P.O. Box 1537 (ED07), Ridgely, MD 21681. Please allow 4-6 weeks for delivery.

Information about energy America can count on

U.S. COMMITTEE FOR ENERGY AWARENESS

©1987 USCEA

The birds and beasts witness the story of Creation in a richly detailed 17th-century Dutch painting. At right, God creates Adam, next (left) fashions Eve from his rib, then (center left) presents her to her mate.

By Dora Jane Hamblin

Has the Garden of Eden been located at last?

By using an interdisciplinary approach, archaeologist Juris Zarins believes he's found it—and can pinpoint it for us

"And the Lord God planted a garden eastward in Eden; and there he put the man whom he had formed" (*Genesis 2:8*). Then the majestic words become quite specific: "And a river went out of Eden to water the garden; and from thence it was parted, and became into four heads. The name of the first is Pison: that is it which compasseth the whole land of Havilah, where there is gold; And the gold of that land is good: there is bdellium and the onyx stone. And the name of the second river is Gihon: the same is it that compasseth the whole land of Ethiopia. And the name of the third river is Hiddekel [Tigris]: that is it which goeth toward the east of Assyria. And the fourth river is Euphrates" (*Genesis 2:10-14*).

But where now are the Pison and the Gihon? And where, if indeed it existed as a geographically specific place, was the Garden of Eden? Theologians, historians, ordinary inquisitive people and men of science have tried for centuries to figure it out. Eden has been "located" in as many diverse areas as has lost Atlantis. Some early Christian fathers and late classical authors

The area thought to be the Garden of Eden, which was flooded when Gulf waters rose, is shown in green. Yellow areas of Bahrain and Arabian coast represent Dilmun, paradise land of Ubaidians and Sumerians.

suggested it could lie in Mongolia or India or Ethiopia. They based their theories quite sensibly on the known antiquity of those regions, and on the notion that the mysterious Pison and Gihon were to be associated with those other two great rivers of the ancient world, the Nile and the Ganges.

Another favorite locale for the Garden had been Turkey, because both the Tigris and the Euphrates rise in the mountains there, and because Mount Ararat, where Noah's Ark came to rest, is there. In the past hundred years, since the discovery of ancient civilizations in modern Iraq, scholars have leaned toward the Tigris-Euphrates valley in general, and to the sites of southern Sumer, about 150 miles north of the present head of the Persian Gulf, in particular (map, above).

To this southern Sumerian theory Dr. Juris Zarins, of Southwest Missouri State University in Springfield, would murmur: "You're getting warmer." For Dr. Zarins, who has spent seven years working out his own hypothesis, believes that the Garden of Eden lies presently under the waters of the Persian Gulf, and he further believes that the story of Adam and Eve in—and especially *out*—of the Garden is a highly condensed and evocative account of perhaps the greatest revolu-

tion that ever shook mankind: the shift from hunting-gathering to agriculture.

No single scholarly discipline will suffice to cover the long, intricate road Zarins has followed to arrive at his theory. He began, as many another researcher has, with the simple Biblical account, which "I read forward and backward, over and over again." To this he added the unfolding archaeology of Saudi Arabia (SMITHSONIAN, September 1983), where he spent his field time for more than a decade. Next he consulted the sciences of geology, hydrology and linguistics from a handful of brilliant 20th-century scholars and, finally, Space Age technology in the form of LANDSAT space images.

It is a tale of rich complexity, beginning 30 millennia before the birth of Christ. Of climatic shifts from moist to arid to moist, with consequent migrations eddying back and forth across, and up and down the Middle East. And of myriad peoples. There were hunter-gatherers whom agriculturalists displaced. There were prehistoric Ubaidians who built cities, Sumerians who invented writing and the Assyrians who absorbed Sumer's writing as well as its legend of a luxuriantly lovely land, an Eden called Dilmun. Finally, there were Kashshites in Mesopotamia, contemporaries of the Israelites then forming the state of Israel.

An endless search for food

There are two crucial if approximate dates in reconstruction. The first is about 30,000 B.C., with the transition from Neanderthal to modern Man. This, some anthropologists believe, took place along the eastern shore of the Mediterranean and Aegean seas and in Iraq. At that time the Great Ice Age still held most of Eurasia in its grip, and it caused the sea levels to fall by 400 feet so that what is now the Persian Gulf was dry land, all the way to the Strait of Hormuz. It was irrigated not only by the still-existing Tigris and Euphrates but also by the Gihon, the Pison and their tributaries from the Arabian peninsula and from Iran. It seems reasonable that technologically primitive but modern Man, in his endless search for food, would have located the considerable natural paradise that presented itself in the area where the Gulf now lies.

But Eden wasn't born then. That came, Zarins believes, about 6000 B.C. In between 30,000 and 6000 B.C., the climate varied. From 15,000 B.C., rainfall diminished drastically. Faced with increasing aridity, the Paleolithic population retreated, some as far as the area known to us as the "Fertile Crescent" (north along the Tigris and Euphrates, westward toward the moist Mediterranean coast, south to the Nile), and also eastward to the Indus River valley. Others, perhaps wearied by the long trek, made do with the more austere conditions of central Arabia and continued foraging as best they could.

In 13th-century Italian mosaic, Noah releases dove from Ark, but raven finds evidence of receding waters.

Then, at about 6000 to 5000 B.C., following a long arid stretch, came a period called the Neolithic Wet Phase when rains returned to the Gulf region. The reaches of eastern and northeastern Saudi Arabia and southwestern Iran became green and fertile again. Foraging populations came back to where the four rivers now ran full, and there was rainfall on the intervening plains. Animal bones indicate that in this period Arabia had abundant game. Thousands of stone tools suggest intensive, if seasonal, human occupation around now dry lakes and rivers. These tools are found even in the Rub al-Khali or Empty Quarter of Saudi Arabia. And so about 6000 to 5000 B.C. the land was again a paradise on Earth, provided by a bountiful nature—God—and admirably suited to the foraging life.

This time, however, there was a difference: agriculture had been invented. Not overnight—"It was a very gradual process, not an event," Zarins emphasizes. It grew up along the Mediterranean coast and in today's Iran and Iraq as groups of hunter-gatherers evolved into agriculturalists. Foragers from central Arabia, returning to the southern Mesopotamian plain, found it already resettled by these agriculturalists. Because the process occurred before writing was invented, there is no record of what upheavals the evolution caused, what tortured questions about traditional values and life-styles, what dislocations of clans or tribes. Zarins posits that it must have been far more dramatic than the infinitely later Industrial Revolution, and an earthquake in comparison with today's computer-age discombobulation of persons, professions and systems.

The author, a frequent contributor, met Dr. Zarins and his Eden theory when writing of Saudi archaeology (September 1983) and has followed his work since.

Assyrian relief of Gilgamesh, legendary god-king of Sumer; a serpent foiled his quest for eternal life.

"What would happen to a forager when his neighbors changed their ways or when he found agriculturalists had moved into his territory?" Zarins asks. "These agriculturalists were innovative folk who had settled down, planted seeds, domesticated and manipulated animals. They made the food come to them, in effect, instead of chasing it over hill and dale. What would the forager do if he couldn't cope? He could die; he could move on; he could join the agriculturalists. But whatever happened, he would resent it."

Eden, Adam and the birth of writing

The crunch came, Zarins believes, here in the Tigris and Euphrates valleys and in northern Arabia, where the hunter-gatherers, flooding in from less hospitable regions, were faced with more technically accomplished humans who knew how to breed and raise animals, who made distinctive pottery, who seemed inclined to cluster in settled groups. Who were these people? Zarins believes they were a southern Mesopotamian group and culture now called the Ubaid. They founded the oldest of the southern Mesopotamian cities, Eridu, about 5000 B.C. Though Eridu, and other cities like Ur and Uruk, were discovered a century ago, the Ubaidian presence down along the coast of Kuwait and Saudi Arabia has been known for little more than a decade, when vestiges of their settlements, graves and distinctive pottery turned up (p. 133).

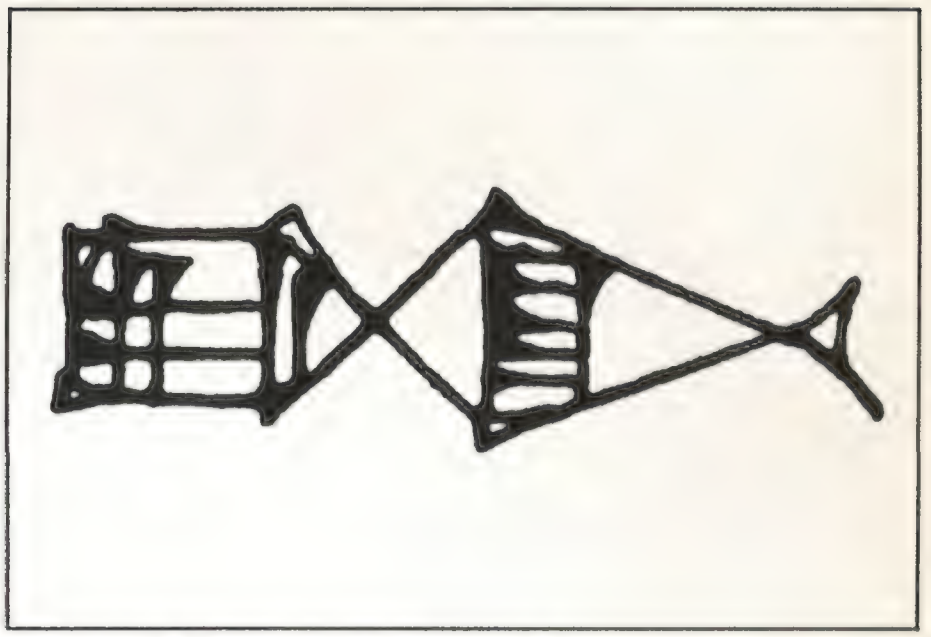
It was in Saudi Arabia that Zarins encountered the Ubaidians, and there that he began developing his hypothesis about the true meaning of the Biblical Eden. One clue lies in linguistics: the term Eden, or Edin, appears first in Sumer, the Mesopotamian region that produced the world's first written language. This was in the third millennium B.C., more than three thousand years after the rise of the Ubaid culture. In Sumerian the word "Eden" meant simply "fertile plain." The word "Adam" also existed in cuneiform, meaning something like "settlement on the plain." Although both words were set down first in Sumerian, along with place names like Ur and Uruk, they are not Sumerian in origin. They are older. A brilliant Assyriologist named Benno Landsberger advanced the theory in 1943 that these names were all linguistic remnants of a pre-Sumerian people who had already named rivers, cities—and even some specific trades like potter and coppersmith—before the Sumerians appeared.

Landsberger called the pre-Sumerian language simply Proto-Euphratian. Other scholars suggest that its speakers were the Ubaidians. However it was, the existing names were incorporated into Sumerian and written down for the first time. And the mythology of a lush and lovely spot called Eden was codified by being written.

"The whole Garden of Eden story, however, when finally written, could be seen to represent the point of view of the hunter-gatherers," Zarins reasons. "It was the result of tension between the two groups, the collision of two ways of life. Adam and Eve were heirs to natural bounty. They had everything they needed. But they sinned and were expelled. How did they sin? By challenging God's very omnipotence. In so doing they represented the agriculturalists, the upstarts who insisted on taking matters into their own hands, relying upon their knowledge and their own skills rather than on His bounty.

"There were no journalists around to record the tension, no historians. But the event did not go unnoticed. It became a part of collective memory and at long last it was written down, highly condensed, in *Genesis*. It was very brief, but brevity doesn't mean lack of significance."

How did it happen that an advanced people would perpetuate a myth making their own ancestors the sinners? It may be that the Ubaidians, who are known to have sailed down the east coast of Arabia and colonized there, ran into descendants of foragers displaced from a drowning Eden, from them heard the awful story of the loss of paradise and repeated it until it became their own legend. Or it may be that, responding to the increasing pressures and stresses of a society growing in complexity, they found comfort in a fantasy of the good old days, when life had been sweeter, simpler, more idyllic. However, it was a tale firmly established in Ubaidian mythology, then adopted and recorded by the Sumerians.



The word "Eden" was first written down in Sumerian cuneiform; there was a word for "Adam," but not "Eve."

Sumerian story of Creation told how water god Enki directed his mother, Nammu, to form Man from clay.

LANDSAT spots a "fossil river"

At this stage in his thesis, Zarins goes back to geography and geology to pinpoint the area of Eden where he believes the collision came to a head. The evidence is beguiling: first, *Genesis* was written from a Hebrew point of view. It says the Garden was "eastward," i.e., east of Israel. It is quite specific about the rivers. The Tigris and the Euphrates are easy because they still flow. At the time *Genesis* was written, the Euphrates must have been the major one because it stands identified by name only and without an explanation about what it "compasseth." The Pison can be identified from the Biblical reference to the land of Havilah, which is easily located in the Biblical Table of Nations (*Genesis 10:7, 25:18*) as relating to localities and people within a Mesopotamian-Arabian framework. Supporting the Biblical evidence of Havilah are geological evidence on the ground and LANDSAT images from space. These images clearly show a "fossil river," that once flowed through northern Arabia and through the now dry beds, which modern Saudis and Kuwaitis

know as the Wadi Rimah and the Wadi Batin. Furthermore, as the Bible says, this region was rich in bdellium, an aromatic gum resin that can still be found in north Arabia, and gold, which was still mined in the general area in the 1950s.

It is the Gihon, which "compasseth the whole land of Ethiopia," that has been the problem. In Hebrew the geographical reference was to "Cush" or "Kush." The translators of the King James Bible in the 17th century rendered Cush or Kush as "Ethiopia"—which is farther to the south and in Africa—thus upsetting the geographical applecart and flummoxing researchers for centuries. Zarins now believes the Gihon is the Karun River, which rises in Iran and flows southwesterly toward the present Gulf. The Karun also shows in LANDSAT images and was a perennial river which, until it was dammed, contributed most of the sediment forming the delta at the head of the Persian Gulf.

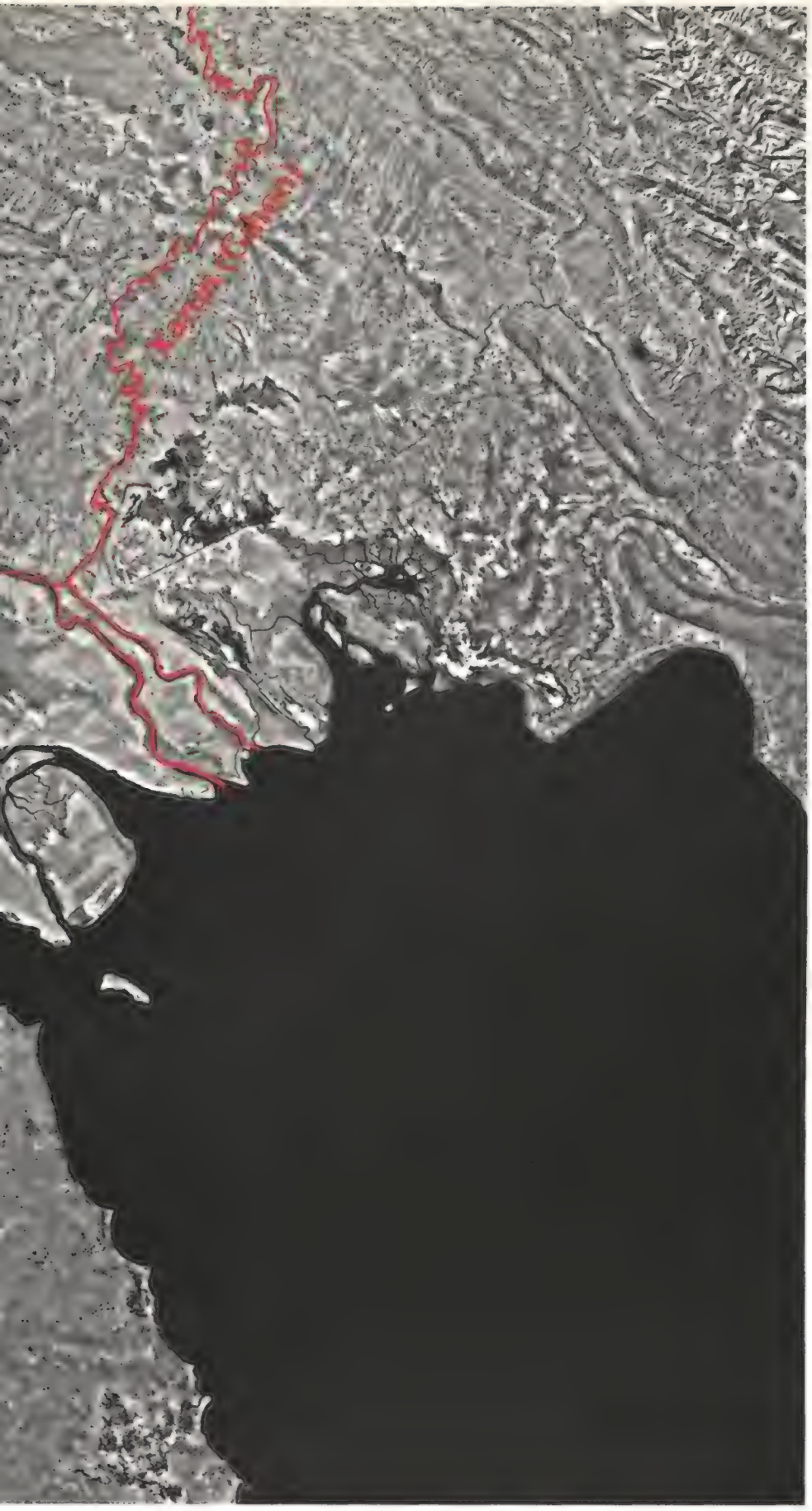
Thus the Garden of Eden, on the geographical evidence, must have been somewhere at the head of the Gulf at a time when all four rivers joined and flowed through an area that was then above the level of the Gulf. The wording in *Genesis* that Eden's river "became into four heads" was dealt with by Biblical scholar Ephraim Speiser some years ago: the passage, he said, refers to the four rivers upstream of their confluence into the one river watering the Garden. This is a strange perspective, but understandable if one reflects that the description is of a folk memory, written millennia after the events encapsulated, by men who had never been within leagues of the territory.

It was Speiser again who suggested that the mysterious Cush or Kush should be correctly written as Kashshu and further that it refers to the Kashshites, a people who, in about 1500 B.C., conquered Mesopotamia and prevailed until about 900 B.C. This Zarins considers a vital clue.

LANDSAT image of head of Persian Gulf shows four rivers of the Bible. Tigris and Euphrates have never ceased flowing. The perennial Gihon has contributed

"At the time the Kashshites were in control in Mesopotamia, the nation of Israel was being formed. The Hebrews must certainly have encountered them, and learned the handed-down traditions of early Mesopotamia, the myths and tales. They must have heard the words Eden and Adam."

The name Eve does not appear in Sumerian but there is a most intriguing link—the account of Eve's having been fashioned from Adam's rib in the Gar-



heavily to delta sediments, causing the channel to shift periodically. Only the flood plain of fossil Pison is visible; sands and settlements filled its course.

Before discovery of these classical pottery sherds in 1968, Ubaid presence on east Saudi coast was unknown.

den story. Why a rib? Well, in a famous Sumerian poem translated and analyzed by scholar Samuel Noah Kramer, there is an account of how Enki the water god angered the Mother Goddess Ninhursag by eating eight magical plants that she had created. The Mother Goddess put the curse of death on Enki and disappeared, presumably so she couldn't change her mind and relent. Later, however, when Enki became very ill and eight of his "organs" failed, Ninhursag was enticed back. She summoned eight healing deities, one for each ailing organ. Now the Sumerian word for "rib" is "ti," but the same word also means "to make live." So the healing deity who worked on Enki's rib was called "Nin-ti" and, in a nice play on words, became both the "lady of the rib" and the "lady who makes live." This Sumerian pun didn't translate into Hebrew, in which the words for "rib" and "to make live" are quite different. But the rib itself went into the Biblical account and as "Eve" came to symbolize the "mother of all living."

This and other ties with Sumerian myth are very clear, and Zarins finds it telling that although the Hebrews had close associations with Egypt, their earliest spiritual roots were in Mesopotamia. "Abraham journeyed to Egypt, Joseph journeyed to Egypt, the whole Exodus story is concerned with Egypt, but there is nothing whatever Egyptian about the early chapters of *Genesis*," he points out. "All these early accounts are linked to Mesopotamia. Abraham indeed is said to have come from Ur, at the time near the Gulf, and the writers of *Genesis* wanted to link up with that history. So they drew from the literary sources of the greatest civilization that had existed, and that was in Mesopotamia. In so doing they turned Eden into the Garden, Adam into a man, and a compacted history of things that occurred millennia before was pressed into a few chapters."

Long before *Genesis* was written, Zarins believes, the physical Eden had vanished under the waters of the Gulf. Man had lived happily there. But then, about 5000 to 4000 B.C. came a worldwide phenomenon called the Flandrian Transgression, which caused a sudden rise in sea level. The Gulf began to fill with water and actually reached its modern-day level about 4000 B.C., having swallowed Eden and all the settlements along

the coastline of the Gulf. But it didn't stop there. It kept right on rising, moving upward into the southern regions of today's Iraq and Iran.

"The Sumerians always claimed that their ancestors came 'out of the sea,' and I believe they literally did," says Zarins. "They retreated northward into Mesopotamia from the encroaching waters of the Gulf, where they had lived for thousands of years."

Their original "Eden" was gone but a new one called Dilmun, on higher ground along the eastern coast of Arabia, enters the epics and the poems in the third millennium B.C. The by then ancient mythology of a land of plenty, of eternal life and peace, had lodged firmly in the collective mind and in a specific geographical area.

The scholarly world first heard about Dilmun a little more than a century ago, when scholars were able to decipher cuneiform tablets unearthed by archaeologist Austen Henry Layard in Nineveh, an Assyrian stronghold in today's Iraq. Its earliest mention was in economic texts referring to traffic in people and goods. On later tablets, to their astonishment, scholars began reading, in literature, not only about Eden and Adam and the "lady of the rib" but also about a Great Flood, and a Sumerian hero called Gilgamesh and his search for the Tree of Life. There was even a serpent.

Gilgamesh had gone "down" from Sumer to the Gulf area where he had been told he would find a plant that would give him eternal life. "What he found may have been coral, which in antiquity was a symbol of eternal life," Zarins explains. "And after his labors he went to sleep and a serpent came along and stole his eternal life—his coral, maybe. Now it may not have been a serpent as we think of one, but instead one of those beautiful feathery creatures that Assyrians depicted in reliefs. But the descriptions of Dilmun are of an area that fits what I've been saying, where societies could exist at the will and bounty of God, in a beautiful setting."

A land for commerce and consecration

There is a curious dichotomy in Dilmun as economic center and also as hallowed place of legend. Its exact location has been a debated issue. It is Zarins'—and most scholars'—conviction that it was the islands of Bahrain and Failaka and the eastern coast of Saudi Arabia. "The island of Bahrain was the Hong Kong of its era," he says, "a rich hub of international trade, with ships coming and going between Mesopotamia and the Indus Valley civilization. Both there and on the eastern coast of Saudi Arabia are tens of thousands of tumuli—far more than the sparse indigenous population would have accounted for—some very rich tombs, most dating to the period 2500 to 1900 B.C.

Some suggest close ties with the Sumerians. Eden was gone so they would want to go to the paradise land of Dilmun either for pilgrimages or as the site of their final resting place. After all, if riches or eternal life were to be had in this area, they might as well get in on it."

One final question must be asked. Why, when the Israelites accepted the ancient stories of Mesopotamia-Arabia, with all their freight of long-forgotten struggles, climatic changes, half-forgotten traditions, did they choose the word Eden instead of Dilmun?

"Perhaps they never heard of the word Dilmun,"

Undulating sea of Bahrain burial mounds, world's largest prehistoric cemetery, dates from Dilmun era.

says Zarins. "We don't really know. Archaeologist Daniel Potts is working on that problem right now: Did the word Dilmun exist in Hellenistic times? There was a linguistic break in Alexander the Great's time. The wedgelike cuneiform was replaced by the alphabetic writing of the Greeks, a much more efficient system. Power passed from the East to the West, to Greece and Rome. The old stories, the old words, faded into obscurity because power goes to those who have it. Until the discovery of the Nineveh tablets, Assyrian cuneiform was dead. Early translators never heard of it. The name and concept of Eden were transmitted not through the Sumerian language of Dilmun but through the Hebrew-Hellenistic one of Eden."

It is an accident of history, of archaeology, of translation, perhaps, that Dilmun was lost and Eden remained. It should not shake the faith of any intelligent human being. If Zarins is correct, there is embedded in the Bible a very ancient folk memory, not only the story of Creation but also the story of Man's emergence from total dependence to perilous self-reliance, with all the man-made dangers incipient therein.

It is thought the Sumerians may have brought their dead to this holy place, the paradise land of legend.

A second cen

Four reasons why Upjohn's commitment to improving the quality of life is greater than ever.

Four lives, filled with potential. For over 100 years, The Upjohn Company has devoted itself to improving the quality of life.

Now, with the dawn of its second century, Upjohn is renewing its commitment. In keeping with a long history of caring, we are rededicating Upjohn's worldwide resources to a fresh struggle against life's most serious diseases.

© The Upjohn Company 1987

tury of caring.

It is a commitment already producing advances like: a new way to stimulate the body's own defenses against cancer; a new anti-coagulant for coronary clots that doesn't leave the body vulnerable to bleeding; and a whole new approach to relief of hypertension.

As modern science surges ahead, all lives benefit. Death from heart disease has declined; the great, terrible fortress of cancer is beginning to crumble; life expectancy has increased over 20 years during the lifetime of one generation.

But the real beneficiaries are the generations to come. Their future is Upjohn's future.

We can hardly wait for our new century to unfold.

Upjohn

One of 31 Grévy's zebras at Canyon Colorado, stallion exhibits close-set stripe pattern typical of species.

By Jack Fincher

El Jefe is building a desert 'ark' to keep zebras and other equids afloat

On an arid plateau in New Mexico, William Gruenerwald fences in a sanctuary where the horse's endangered relatives can reproduce

Standing on rimrock, Gruenerwald gestures toward Canadian River 800 feet below. Canyon forms natural boundary on eastern side of Gruenerwald's preserve, keeping animals from leaving grasslands to the west.

Sometimes, as he crouches with sweat-slickened pliers in the hot dry dust of northern New Mexico, Nick Hadden feels like a bridge painter whose tedious task is never done. No sooner do his repairs get to where the eight-foot fence of triple-strength chain link last ended than he finds that *El Jefe*, as "the boss" is known in this predominantly Hispanic part of the country, has added another stretch. Maybe, a coworker jests one day, Hadden ought to hide *El Jefe*'s surveying transit. Nick, who has been on the job for six years, looks up and grins. "What for?" he asks. "He'd only find another one."

He would indeed. *El Jefe*, otherwise known as William Gruenerwald, is a 70-year-old petroleum geologist who made some money in the oil business and is now spending a lot of it on an extraordinary personal crusade. His objective is to protect zebras, onagers, kulans and other wild relatives of the domestic horse from the threat of extinction. The focal point of his work is the Canyon Colorado Equid Sanctuary, a 6,000-acre private preserve located on the high plains about 60 miles east of the Rocky Mountains, near a village called Wagon Mound (pop. 630). When Gruenerwald and his crew are finished, their fences will extend across 15 miles of wind-burned hills and dusty green grasslands that bear a striking resemblance to the savannas of East Africa and the steppes of central Asia —which, as it happens, is where many of the 100-plus animals quartered here originate.

But there is more to this refuge than land and animals. There are solar-heated shelters, grain- and hay-storage sheds, water tanks, residential buildings and

Photographs by Peter C. Poulides

Gruenerwald chats with members of mostly Hispanic crew after completion of morning feeding chores.

A family of Hartmann mountain zebras wanders across grazing territory, 2,000-acre park within refuge.

a headquarters complex with an aircraft hangar, modern offices and a veterinary clinic. There are computers, and towers with remote-control cameras that can "see" in the dark. There is a portable tranquilizer gun that can be aimed and fired using closed-circuit television. Far from being a place where exotic animals are merely kept, Gruenerwald's operation is a high-tech propagation center where some of the world's most endangered species can be bred using advanced embryo-transfer techniques.

If Bill Gruenerwald has his way, and he usually does, the sanctuary will eventually harbor 250 to 300 equids. Included among the animals there now are two species of zebras—Grévy's and Hartmann—as well as kulans, onagers and Somali wild asses. A 3,000-acre hay farm located nearby will someday be home to a herd of Przewalski horses; the first two, both males, have already arrived and a female is due shortly.

The Przewalski horses are an extreme example of the plight of equids in general. They have not been seen in their native Mongolian habitat for more than 40 years and survive today only in captivity. Wild populations of other species range from the low thousands for some zebras to the low hundreds for the Somali wild ass. All are disappearing at rates guaranteed to ensure their extinction in the next century. The main reason is habitat loss, an increasingly serious problem that has been exacerbated in Africa recently by drought and desertification. Not infrequently, the creatures are killed for meat and their hides or because they are perceived as competitors with domestic livestock for water and forage.

One factor working in the equids' favor is their propensity to reproduce thousands of miles from their natural homelands. This has led to the development of breeding programs on game farms and in zoos all over the world. The danger, however, is that captive populations could be weakened by generations of inbreeding. Many zoos are now enrolling their endangered animals in the International Species Inventory System (ISIS), a mechanism for monitoring genetic diversity that is coordinated by the American Association of Zoological Parks and Aquariums (AAZPA). Even so, institutions are not always willing or able to undertake the risky and expensive animal exchanges that are needed to obtain healthy genetic results. That's where Canyon Colorado comes into play.

Gruenerwald does not intend to leave the reproduction of his herds entirely in Mother Nature's hands. He has joined forces with one of the nation's top embryo-transfer teams and acquired the sophisticated equipment it will need to work at the sanctuary. Breeding will be carefully controlled and, if all goes as expected, Gruenerwald's animals will soon be producing more offspring under scientific supervision than would ever be possible under normal conditions. Zoos will be the beneficiaries of all this. They will be able to replenish their own equid populations with fresh infusions of genetically sound animals from Canyon Colorado. Eventually they may even be able to

Sandcastles, the China Clipper and New York's Astor Place Riot were the subjects of Jack Fincher's most recent articles in SMITHSONIAN.

Veterinarian and assistant console Grévy's foal after surgery to set leg broken during skirmish within herd.

make withdrawals from a "bank" of frozen embryos maintained at the sanctuary.

It's heady stuff, and expensive. Gruenerwald pays $10,000 to $20,000 for each animal he imports. So far he has invested millions in the sanctuary and he intends to endow it with a significant bequest. "We don't claim to have all the answers," he says, "but we're determined to do everything we can to keep these marvelous species from disappearing."

Zoo people, not surprisingly, are impressed. "Bill's a doer, not a talker," says James Dolan, curator of mammals at the famous San Diego Zoo and Wild Animal Park in California. "He's effectively focused on one group of endangered species and drawn in all kinds of expertise." "No facilities in the world can come anywhere near his," adds Oliver Ryder, geneticist with the San Diego Zoological Society and national coordinator of the Przewalski Horse Propagation Group, which involves 12 zoos in North America. "He's proving that one person can make a real difference."

During the equid family's previous 60 million or so years on Earth, real differences were mainly a function of evolution. The forerunner of most if not all hoofed mammals was a five-toed plant eater called the condylarth. Eohippus (dawn horse), the earliest known direct ancestor of horses, made its appearance in the Eocene epoch. It had four toes on its front feet (three on each hind foot), stood ten to 20 inches high and in size resembled a fox terrier. Most equids, including eohippus, evolved on the Great Plains of North America and spread to Eurasia on land bridges. They relied on speed to escape predators. Gradually their toelike

Graduate student Mary Rowen uses computer to store data for research on interactions of foals and mares.

appendages were reduced to a single digit, the hoof.

The modern-day descendants of those pioneers fall into several groups that constitute the family known as the Equidae: true horses (consisting of the various domesticated varieties and the Przewalski), zebras (including the common or plains variety as well as Grévy's and Hartmann), Asiatic asses (the kiang, kulan and onager) and the Somali and Nubian asses of Africa. Though they differ in size, shape and coloration—the short-maned Przewalski horse is heavyset and blocky, the finely-striped Grévy's is tall and regal, the long-eared ass is small and slender—they are all speedy afoot and herbivorous. Some live in small, remarkably stable social groups consisting of a stallion, his harem of mares and their offspring, but Grévy's and the wild asses are less socially inclined and the stallions are territorial. Equids share one other characteristic: they are ever so vulnerable to displacement by Man.

Bill Gruenerwald's first exposure to what might be called endangered animals occurred when he was growing up in suburban Chicago. His father, an organic chemist, was employed by a dog-food processing firm to develop by-products from horsemeat. "They let me come out and ride," he remembers. "I was too young to realize what was going on, but sometimes I did wonder why I never got the same horse twice."

After graduating from Northwestern University, Gruenerwald landed a job as a mining geologist in Asia. During the early months of World War II, he helped the British Army blow up bridges and sink dredges to keep them from the invading Japanese in Malaya. Later, while carrying out mineral explorations in China and Tibet, he saw for the first time marketplaces filled with the skins and pelts of Siberian tigers, golden monkeys, snow leopards and pandas. In Equatorial Africa, he witnessed the bloody spectacle of native gorilla hunts. Back in the States after the war, working as an independent oil operator, he reacted with growing concern to reports of wildlife depredations all over the world.

Then came a stroke of luck that enabled the adventurous entrepreneur to do what comes naturally: take matters into his own hands. Gruenerwald struck pay dirt in a remote part of northeastern Kansas. It was his first oil-field bonanza but it would not be his last. "He's got the knack," says an admiring former associate. "In the oil business he's called the Gray Ghost. A lot of people know he's fantastically successful, but they've never seen him operate."

A Somali wild ass, rarest of the endangered species at Canyon Colorado, basks contentedly in the sunlight.

Avoiding the fate of the quagga

About ten years ago, Gruenerwald read a book entitled *A Natural History of Zebras* by zoologist Dorcas MacClintock. In it, MacClintock deplored the plight of several zebra subspecies that seemed destined to go the way of the quagga, a partly-striped creature that died out in the last century. Suddenly, Gruenerwald knew what he was going to do. He and his wife, Dorothea, a resourceful woman who raises Rottweiler dogs, owned a 40,000-acre cattle ranch in New Mexico. Why not create a haven for the endangered relatives of the quagga? It would be a radical departure from the close confinement that was all too typical of zoos. It would permit the animals to run free and at the same time it would serve as a research center for behavioral studies, animal husbandry and breeding.

Commuting by auto from his home in Colorado Springs, Gruenerwald hired a crew in New Mexico and went to work. Almost immediately the rugged sandstone land resisted. Percussion drills and augers proved next to useless for digging postholes. Unfazed, *El Jefe* switched to a track-mounted, compressor-driven rotary drill that he remembered from his early days in mining. Supplies, material and equipment were trucked in, sheds erected, roads built, water wells drilled and electric-power lines installed.

Soon weary of the eight-hour drive, Gruenerwald moved a house trailer onto the site. A year later, a grass landing strip was laid out for a twin-engine Beech aircraft that trimmed the commute to 45 minutes. Local employees were trained and put on a permanent payroll. An equine veterinarian was hired to supervise the care of the sanctuary's future boarders. Then, on August 15, 1978, four pairs of Grévy's zebras arrived by truck from a dealer in Texas. Canyon Colorado was open for business.

Listen to this idea.

Shoot.

It's for a fax machine like no other fax machine ever made.

With more memory?

600 pages. With that much memory, you could send a 30 page document to 35 branch offices with the touch of a button. And you can assign private mailboxes, for your-eyes-only mail.

Fine idea.

That's just for starts. We can tie it into the PC to exchange information between the fax and PC networks.

And! We can simplify the operation so you pencil in a few marks on a card, use that as the first page, and fax anything out to 99 preset phone numbers. And!

Another and?

And, we'll diagnose problems over the phone, long distance, and fix them, electronically. You may never need a service visit. Good?

Astounding. We better tell our management to sit down before we lay this on them.

Pitney Bowes
facsimile systems
For details call
1-800-MR. BOWES, ext. 385.

A climate that grows ideas

Pitney Bowes

A pair of Przewalski horses loaf in paddock. Upright manes, blocky heads are distinguishing features.

At first, business was not exactly booming. Gruenerwald discovered that few African and Asian countries were willing to release significant quantities of rare animals to an unknown conservationist from America. Nevertheless he persevered and eventually managed to obtain a number of animals from zoos abroad. He purchased others at game farms and zoos in this country. Today, acquisition is somewhat easier. More people in the animal business now know Gruenerwald's reputation and the AAZPA operates a clearinghouse for notices of stock that is available worldwide.

Since the animals at Canyon Colorado are native to desert and semidesert areas, they feel right at home on the arid terrain of New Mexico. Their needs are few: adequate food and water, enough room to roam, enough freedom to work out their social pecking orders and ritualized mating routines. The sheer size of the refuge enables them to live normal lives within their wandering herds. And because the different species tend to graze on different vegetation, or on the same plants at different stages of growth, competition between them is minimal. Management by Gruenerwald's staff consists basically of providing supplemental food, salt and water, and keeping a sharp eye out for signs of illness or injury. Vigilance is especially important during the mating season when males within each species vie for the right to breed.

When Gruenerwald flew a visitor down from Colorado for a tour of the refuge not long ago, several kulans and zebras grazing near the runway seemed unimpressed by the plane's noisy approach but acted more skittish around autos. Dressed in plain work clothes, boots and a narrow-brimmed khaki hat, Gruenerwald kept up a running commentary. "Watch out for the kulans, they bite." He pointed to a sign in one building that warned the crew not to approach the animals. "The one we call Otto nearly bit the fingers off a man's hand." Notwithstanding the fact that they are dangerous, Gruenerwald revealed a special feeling for his kulans. "Mischievous is the only word for them," he said. "They sneak into buildings, steal grain, open locked gates. They run after trucks like a dog and jump from hiding to scare people."

Gruenerwald pointed to some zebras a hundred yards away. "Now the Hartmann," he said, "you can tell them because they have a dewlap on the underside of their neck and a distinctive grid pattern on their rump. See? Grévy's were named in honor of a 19th-century president of France, Jules Grévy. They have rounded ears and a pattern of close stripes."

Grévy's zebras are boisterous animals. They skirmish frequently and injuries are not uncommon. Recently, a two-week-old foal named Jimmy got caught in a clash between adults and suffered a broken leg. He was found by Mary Rowen, a graduate student from Yale who was studying zebra behavior at the sanctuary. The foal underwent surgery, endured the discomfort and indignity of an awkward cast for ten weeks (p.141) and eventually made a full recovery.

Grazing placidly at the refuge, kulans don't appear dangerous but they have attacked and injured keepers.

Hartmann presents a strong case, for your next case.

And you don't have to be a lawyer to need one. You can be an executive. A sales executive. A rising executive. A junior executive. Or, yes, a lawyer.

You see, the evidence suggests that whatever you need to carry will be better carried in a Hartmann. Because it will be fully protected, and neatly organized. And all that will help you make a good impression.

Quite simply, Hartmann is dedicated to building the best case. With the best leathers. The best tweed. The best vinyl. And the best locks.

Hartmann. No one builds a better case.

hartmann®

We don't cut corners.™

Du Pont TEFLON® water & stain repeller

Send for a list of your nearest Hartmann dealers, Dept. 5SM31

© 1986 Hartmann Luggage, Lebanon, Tennessee 37087

A haven for endangered equids

Staff member loads rifle with syringe dart containing drug used to immobilize zebras for examinations.

Gruenerwald is justifiably proud of the operations center at his headquarters complex. It is a remarkable facility that houses a ground-based radar system and meteorological recording instruments as well as a computer terminal and the closed-circuit video console. With a range of 200 miles, the radar provides early warnings of the severe thunderstorms that sweep through the area in the summer months, frequently making travel on the sanctuary (or in the air above it) hazardous. The computer is used for keeping all kinds of records, including veterinary reports, meteorological data and detailed files on each equid. The video console is linked, through a microwave system, to remote camera installations that make it possible to maintain constant surveillance of equine activities. It can be activated to take photographs and, through an intriguing bit of technological wizardry, to operate the rifle that is sometimes used to inject animals with a tranquilizing drug.

Canyon Colorado's equids are often immobilized for relocation or medical examinations. A veterinarian can usually accomplish this by stalking the "target" on foot or in a vehicle, but some zebras are impossible to approach. Grain is put out to bait a wary animal within range of the rifle, which is loaded with a syringe dart and mounted on an elevated platform. At the feeding station, a microwave signal activates a laser beam, which indicates on the video monitor at the center where the dart will go. Observing the laser, the console operator aims the rifle at the animal's hindquarters and then fires the dart by flipping a switch. The veterinarian then tracks his quarry on televison until the tranquilizer takes effect.

New frontier: embryo transfers

In his search for people who could help him make his sanctuary what he wanted it to be, Gruenerwald became acquainted with an animal-reproductive physiologist named Betsy Dresser. She is affiliated with the Cincinnati Zoo and King's Island Wild Animal Habitat. She is also director of the Cincinnati Wildlife Research Federation. Gruenerwald was intrigued by her embryo-transfer work with African antelope and today she heads up the team that will initiate transplants at Canyon Colorado.

An embryo transfer is just that. It involves switching fertilized eggs from one animal to one or more other animals. The surrogate animal or animals take the embryos to term, leaving the real mother free to ovulate and breed again. This strategy can lead to dramatic increases in the number of offspring. Normally, for example, a zebra mare produces one foal a year. Embryo transfers may make it possible to double or triple that total. Even more spectacular results have

WHAT IF YOUR NAME IS ARMSTRONG AND YOU'VE NEVER SET FOOT ON THE MOON?

JUNE ARMSTRONG, REGISTERED NURSE

Investment firms are always interested in people moving up in the world. So imagine the attention you get when you're the first man to land on the moon.

Neil's sister, June, found a firm where you don't have to fly through galaxies to be treated like a star.

Dean Witter.

Just like every Dean Witter client, June has her own Account Executive who can help with all of her financial needs. In fact, right now, we're helping her plan for retirement and her grandchildren's education.

Through her Account Executive, June has the benefit of Dean Witter's resources, expert advice, and full range of investment opportunities.

When you're a Dean Witter client, we'll offer you the same special treatment.

So call one of our offices today. Or simply stop by and talk with a Dean Witter Account Executive.

And don't be concerned if you've never flown through the stratosphere. We'll still treat you like you're out of this world.

After all, you're somebody at Dean Witter.

You're somebody at Dean Witter.

A member of the Sears Financial Network

DEAN WITTER

© 1987 DEAN WITTER REYNOLDS INC. MEMBER SIPC.

Solar shed is one of 14 heated shelters in the sanctuary which protect equids during cold winter months.

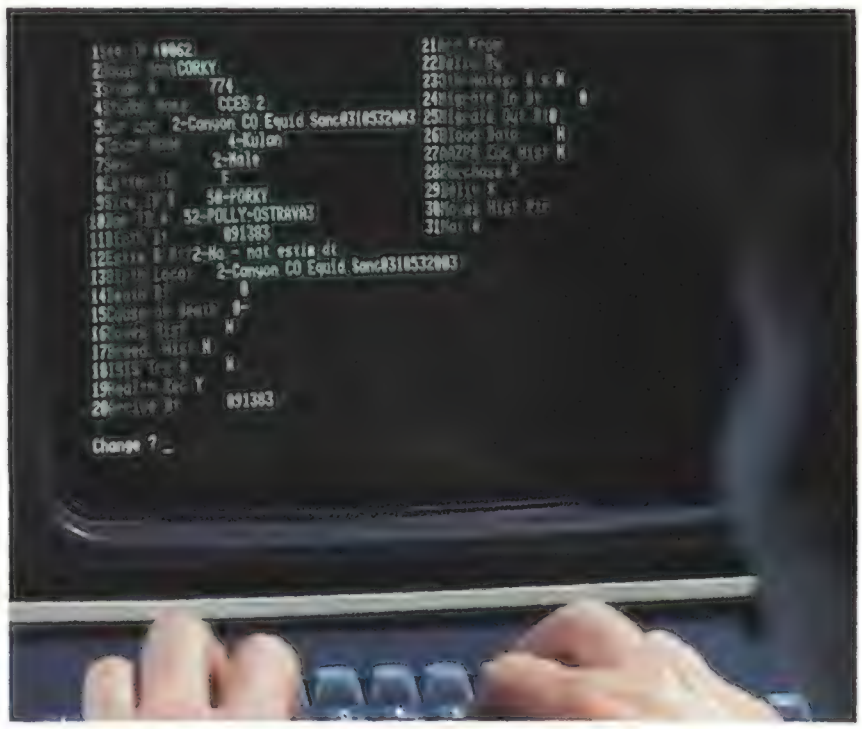
At operations center, technician compares zebra on video monitor with picture on its identification card.

been obtained with dairy cattle, sheep and pigs by hormonally encouraging "superovulation"—the production of many more eggs than would normally occur—before breeding takes place. Thus far the technique has not been effective with equids, but research is still under way.

Dresser has also been working in Cincinnati on a procedure called micromanipulation, or embryo splitting. It involves the use of special equipment to produce identical twins by splitting an embryo in half. The procedure has been tried successfully on cats and other domestic animals and Dresser hopes to use it on zebras at the sanctuary.

Another promising possibility has to do with something Dresser calls the "frozen zoo." Freezing and holding embryos taken from endangered zebras and other species may be a way to build up genetically-robust reservoirs that can be preserved for hundreds of years. "This might be the key to staving off extinctions in the future," Dresser says. If the problems of freezing can be solved, she's ready to start collecting the embryos for such a bank in New Mexico.

The first experiment with embryo transfers at Canyon Colorado is scheduled to take place this summer. Dresser has been "rehearsing" at her laboratory in Cincinnati for months. The subjects will be six Hartmann zebra mares; a half-dozen quarter-horse mares will serve as the surrogate mothers. The zebras will be immobilized, using the portable tranquilizer gun, and then injected with a hormone to stimulate ovulation. The horses will receive a different hormone to get them ready to receive the embryos. After the zebras are bred but before their fertilized eggs become attached to the uterine wall, each animal will be herded into a chute and sedated. The embryos will be re-



Staff member retrieves computerized information on male kulan named Corky from refuge's data bank.

A worker adjusts solar panel that charges battery supplying electricity for fence used to divide pasture.

Most of Debi Thomas' greatest performances have never been seen.

She'll be here for six grueling hours. It's hard, punishing drudgery, but champion figure skater Debi Thomas knows how important these daily practice sessions are.

Audiences are dazzled by the spectacular loops and jumps in her freestyle routines. But that artistry doesn't come easily; it requires perfect control, balance, and coordination. Because those are the fundamentals of skating and they must be mastered.

At Raytheon, we base our performance on fundamentals, too. Business fundamentals such as employing dedicated people, extensive research, careful design, and the use of sound materials and efficient manufacturing methods. And, of course, quick response to customers' needs. Applying those basics every day enables us to produce superior products in electronics, aviation, appliances, energy, construction, and publishing.

Write for a booklet that shows how this philosophy produces the results customers want. You'll understand why we say, at Raytheon, quality starts with fundamentals.

Raytheon Company, 141 Spring Street, Lexington, MA 02173.

Raytheon

Where quality starts with fundamentals

moved and, within several hours, transferred to the quarter-horse mares. Each horse will receive only one; any additional embryos will be frozen in liquid nitrogen for possible future use. Gestation takes between 11 and 13 months and the births will be allowed to occur normally. The foals will remain with their surrogate mothers for six months before finally joining up with a zebra herd. Meanwhile, their real mothers will continue to breed and produce more embryos.

For Przewalski horses, captive breeding has been a decidedly mixed blessing. On the one hand, it has made possible a remarkable comeback: the species' numbers have almost doubled in the past decade to 614 animals. On the other hand, 11 generations of inbreeding have reduced fertility, increased abortions, shortened lifespans and, in some cases, produced such congenital defects as stunted growth, weakened hindquarters and coordination trouble. Gruenerwald and his associates are determined to avoid these problems at Canyon Colorado by breeding their animals for the greatest possible genetic diversity. In order to do that, they have devised a computerized record-keeping system that will tell them, and everyone they deal with, exactly what they have on hand. Not only will this system keep track of all breeding done at the sanctuary; it will also tie in with other studbooks all over the world. Thus, for example, when Gruenerwald considers mating a particular pair of Przewalski horses, his computer will link up with the international-studbook records in Prague, Czechoslovakia, and calculate the genetic implications.

If such a system is a tribute to the computer's capacity for dealing with unimaginably complex genetic data, it is no less a tribute to Bill Gruenerwald's determination to do it right. He is not one to cut corners, seek shortcuts or settle for anything less than the very best. Having set out to establish a last line of defense for wild creatures that he loves, he is committed to succeed. He is driven now not by the desire for professional success that once motivated his life but by a singular passion for preservation. "I guess I just want to leave the world in a little better shape than it was in when I found it," he reflected recently.

He was waiting for his pilot to roll out the airplane for a quick flight to the hay ranch, where a new irrigation system was being installed. Zebras and kulans were galloping around the airport road in a display of high spirits, kicking up clouds of amber dust. Gruenerwald's florid face broke into a smile. "Look at that!" he exclaimed. "Isn't that something?" It was indeed.

In Cincinnati lab, microscope (top right) transmits image of embryo-splitting procedure to display screen.

Ambling along a refuge road, Grévy's zebra embodies hopes that vanishing equid species may yet be saved.

The Freedoms Foundation at Valley Forge
announces a major new tribute to our nation's patriots

A Magnificent Chess Set Portraying the Heroes of America's Fight for Liberty

Authentic sculptured portraits of great heroes of American independence.

Crafted in solid pewter on a base of cast marble, with a magnificent chessboard of gold and silver on brass.

Chess sets representing great historical events have been prized by people of taste and sophistication for generations. Treasured by serious collectors. And often passed along as valued heirlooms.

Now, The Freedoms Foundation at Valley Forge—dedicated to perpetuating the ideals of American independence—presents the most important and luxurious chess set that has ever been created for Americans.

Portraying brave patriots of our country's fight for freedom, it brings into your home a unique and exciting panorama of the American Revolution.

Remarkable portrait sculptures

This fascinating chess set comprises three-dimensional sculptures of great generals and infantrymen of the Revolutionary War. Each sculpture is a work of art in itself—richly detailed and historically accurate. And each figure is meticulously crafted in solid pewter, then set on a finely sculptured base of cast marble. In addition, every figure is clearly identified by name.

To design the chess pieces and produce them in pewter, The Freedoms Foundation has appointed the skilled craftsmen of The Franklin Mint.

Elegant chessboard created expressly for this set

As part of the chess set, you will receive a custom-designed chessboard unlike any ever created before. Beautifully finished in gold

COURTESY U.S. CAPITOL HISTORICAL SOCIETY

Chessboard and hardwood case provided as part of the set. Actual size 12⅛" square.

and silver electroplate on brass, its background design forms an attractive map of the thirteen original colonies.

This superb playing board also becomes the cover for the hardwood presentation case that stores and protects the 32 chess pieces.

Displayed in your living room, den or office, the imported Revolutionary War Chess Set will be admired by all who visit your home. For it will add an impressive touch of history to your decor—symbolizing the conflict that changed the lives and fortunes of all Americans.

But this chess set will not be sold in any stores. It is available *only* from The Franklin Mint. The chess pieces will be sent at the rate of two every *other* month, but you will be billed for only *one* at a time—just $19.50 each. (There is no added charge for the chessboard.)

To acquire this heirloom American chess set for your home and family, please mail your subscription application to The Franklin Mint, Franklin Center, PA 19091, by June 30, 1987.

© 1987 FM

SUBSCRIPTION APPLICATION

AN OFFICIAL ISSUE OF

The Freedoms Foundation at Valley Forge

Please mail by June 30, 1987.

The Freedoms Foundation
c/o The Franklin Mint
Franklin Center, Pennsylvania 19091

Please enter my subscription for The Freedoms Foundation Revolutionary War Chess Set, consisting of 32 playing pieces in fine pewter, mounted on a base of cast marble, with a luxurious chessboard of gold and silver electroplate on brass.

I need send no money now. I will receive two playing pieces every *other* month but will be billed for just *one* at a time—$19.50* per month—beginning when my first shipment is ready to be sent to me. There is no added charge for the chessboard and presentation case.

**Plus my state sales tax and 50¢ for shipping and handling*

Signature_____
ALL APPLICATIONS ARE SUBJECT TO ACCEPTANCE

Mr.
Mrs.
Miss_____
PLEASE PRINT CLEARLY

Address_____

City_____

State, Zip_____

By Donald Dale Jackson

World's fastest literary gun: Louis L'Amour

For his enormous contributions to Western literature, L'Amour was awarded Congressional Gold Medal.

The novelist who made the modern Western a national pastime is now planning a center to preserve America's heritage of local history

Right now, as you're reading this, Louis L'Amour is tapping at his electric typewriter in a room in Los Angeles the size of a volleyball court. While birds chirp in the yard outside his window and traffic hums on nearby Sunset Boulevard, L'Amour is writing a bestseller. It's not that he needs the money or acclaim that successful authors receive; he has all that and more. L'Amour is writing because he wants to know what's going to happen next. There's a hero in a jam out there somewhere, in Arizona or Siberia or Texas, and L'Amour has to get him out of it. He can't wait to get to the typewriter every day just to find out how he's going to do it.

Louis (pronounced Louie) L'Amour is a publishing phenomenon of colossal proportions. For more than 30 years, since *Hondo* in the early 1950s, he has been writing Western novels that sell with the volume and regularity of Scout handbooks. Presidents from Eisenhower to Reagan have delighted in his sagas of heroes and villains stalking each other across his authentically rendered landscapes of the American frontier. His stories, appearing first in now extinct pulp magazines, moved without breaking stride through the genre paperback category to movies (*The Burning Hills, Heller in Pink Tights*) and hardcover bestsellerdom (*Jubal Sackett, Last of the Breed*), a progression one editor compares to vaulting from the ghetto of publishing to a Fifth Avenue penthouse. In recent years honors and awards have been showered on him—a Congressional Gold Medal (above), the Presidential Medal of Freedom, honorary degrees—and even critics, the last converts, have become semirespectful. Louis L'Amour has become part of our cultural consciousness. "He's the only movable piece of Mount Rushmore," said his old friend Saul David, once his editor and now a movie producer.

But there is another side to the man behind the monumental reputation that most of his ardently loyal fans know nothing about. In his own quiet and low-key way L'Amour has established himself recently as a cultural and literary philanthropist. A man who educated himself through a lifetime of omnivorous reading, he now helps encourage others to read as a member of the executive council of the Center for the Book in the Library of Congress. "In an electronic world there's a question whether people will still read," he says. "My education, from books, didn't depend on a power source." John Cole, who directs the Center for the Book, values L'Amour's participation "because he was in many ways shaped by the books he read, and he takes it farther in his feeling for books and his promotion of reading."

Another cherished L'Amour project is a "Library of Americana" he hopes to build (quite possibly on his ranch) in a part of the West he loves, the Four Corners region. "The idea is to assemble local publications from all around America—memoirs, local histories, historical-society booklets, newspaper pamphlets—there are thousands of them. It's history that the historians never see. I'd include the basic books on Amer-

Photographs by Chad Slattery

L'Amour perches on 18th-century library chair, also called cockfighting chair, perhaps used by fight judge.

An insatiable reader, as well as writer, he left school at 15 but is self-taught from books and travel.

Kay Jewelers and J.B. Robinson Jewelers have joined together to serve you better. Each of our 382 conveniently located stores in 32 states provides quality jewelry at very fair prices.

Kay Jewelers

Alabama (2)
Arizona (9)
California (26)
Colorado (2)
Connecticut (7)
Florida (20)
Georgia (14)
Illinois (3)
Indiana (9)
Iowa (1)
Kansas (1)
Kentucky (5)
Louisiana (5)
Maryland (20)
Massachusetts (16)
Mississippi (3)
Missouri (2)
Nevada (1)
New Hampshire (2)
New Jersey (5)
New York (29)
North Carolina (13)
Ohio (3)
Oklahoma (3)
Pennsylvania (41)
Rhode Island (1)
South Carolina (4)
Tennessee (4)
Texas (19)
Virginia (14)
W. Virginia (4)

J.B. Robinson

Florida (9)
Georgia (5)
Illinois (12)
Indiana (3)
Kentucky (3)
Louisiana (4)
Maryland (3)
Michigan (13)
Ohio (21)
Pennsylvania (1)
Texas (11)
Virginia (8)
Wisconsin (1)

For the location of the Kay/J.B. Robinson store nearest you call between 9AM and 5PM Eastern time toll free (800) 647-0012. In Metropolitan Washington, D.C. 549-1890. In Virginia (703) 549-1890.

KAY
JB ROBINSON
JEWELERS
The diamond people ®

© 1987 Kay Jewelers, Inc.

ican history and the historical and genealogical manuscripts that readers send me." He envisions an archive where scholars can study the story of America as recounted by ordinary Americans, and hopes that it will be in place within five years. He is also involved in an attempt to develop an authentic re-creation of a late 19th-century Western town, a privately financed "Western Williamsburg" that would be a living, functioning museum of the frontier, with stores and stage stations and a working ranch.

Though he recoils in protest when called philanthropic, L'Amour sponsors several outstanding high school students honored annually by the California-based American Academy of Achievement. The institution brings teenage high achievers to a three-day seminar where they meet with Nobel and Pulitzer Prize winners and other innovators. He has also supported and encouraged promising Navajo artist Clifford Brycelea, hosting an exhibition of his work. Brycelea's mystical paintings hang in his home and one is on the cover of L'Amour's most recent book, *The Haunted Mesa.*

Still ruggedly handsome in his late 70s, L'Amour is tall and broad-shouldered with eyebrows that peak in gray-brown arrowheads. He wears Western shirts and string ties and cowboy boots, and speaks in a measured, confident baritone. His manner is sober, self-contained and unaffectedly modest. "I've seen him at banquets where everyone is preening his tail feathers," says an editor he knows, "but not him, he doesn't need to." L'Amour looks like he might once have been a tough hombre—he was a prizefighter and a seaman among other things as a young man—and he would be no pushover even now. Though he lives among the Hollywood glitterati, there is nothing Hollywood about him.

In a community of resplendent egos and serial marriages, L'Amour has kept a clear head on his priorities. He takes more pride in his family and his 10,000-volume library than in any of his million-sellers. L'Amour waited until he was established and well into his 40s to marry because he had seen

Behind L'Amour in his paper-packed workroom are 12-foot-high, 30-foot-long bookshelves that pull out to reveal still more shelves.

A. Opal & diamond pendant $695. **B.** Opal and diamond ring $695. **C.** Half carat heart shaped ruby ring surrounded by diamonds $1995. **D.** Matching ruby & diamond pendant $1995. **E.** Ring set with 1 1/2 carats of diamonds $2295. **F.** Diamond ring $595. **G.** Twin pearl ring with diamond accents $995. **H.** Marquise bridal set in 18K gold $2995. **I.** Sapphire & diamond ring $1295. **J.** Onyx & diamond ring $895.

Classique Collection

JB • ROBINSON JEWELERS

K • A • Y JEWELERS
The diamond people®

c 1987 Kay Jewelers, Inc.

A Spectacular of Wonders—
Now on Videocassette

Life on Earth

A Natural History Written and Hosted by David Attenborough

A magnificent, comprehensive video encyclopedia of the marvels of nature, the secrets of evolution.

Four fascinating hours on two videocassettes. Based on the acclaimed television series and its best-selling companion book.

At local video stores everywhere
Or order from

1-800-543-1300 operator 390.

Local sales tax plus postage and handling will be added to phone orders.

Item No. 9937 VHS / 9938 Beta
Media Code No. SQ651

© 1986 British Broadcasting Corporation and BBC Enterprises Ltd
© 1987 Warner Home Video Inc.
*Suggested List Price per Set. Higher in Canada.

"Stunning... a brilliant achievement."
–THE NEW YORK TIMES

"The best introduction to natural history ever written."
–UPI

WARNER HOME VIDEO

A Subsidiary of Warner Bros. ● A Warner Communications Company
4000 Warner Blvd., Burbank, CA 91522

too many other writers take less fulfilling jobs to support their families. He and his wife, Kathy, who handles his business affairs, were married 31 years ago. Their children, 26-year-old Beau and 23-year-old Angelique, aspire to show-business careers.

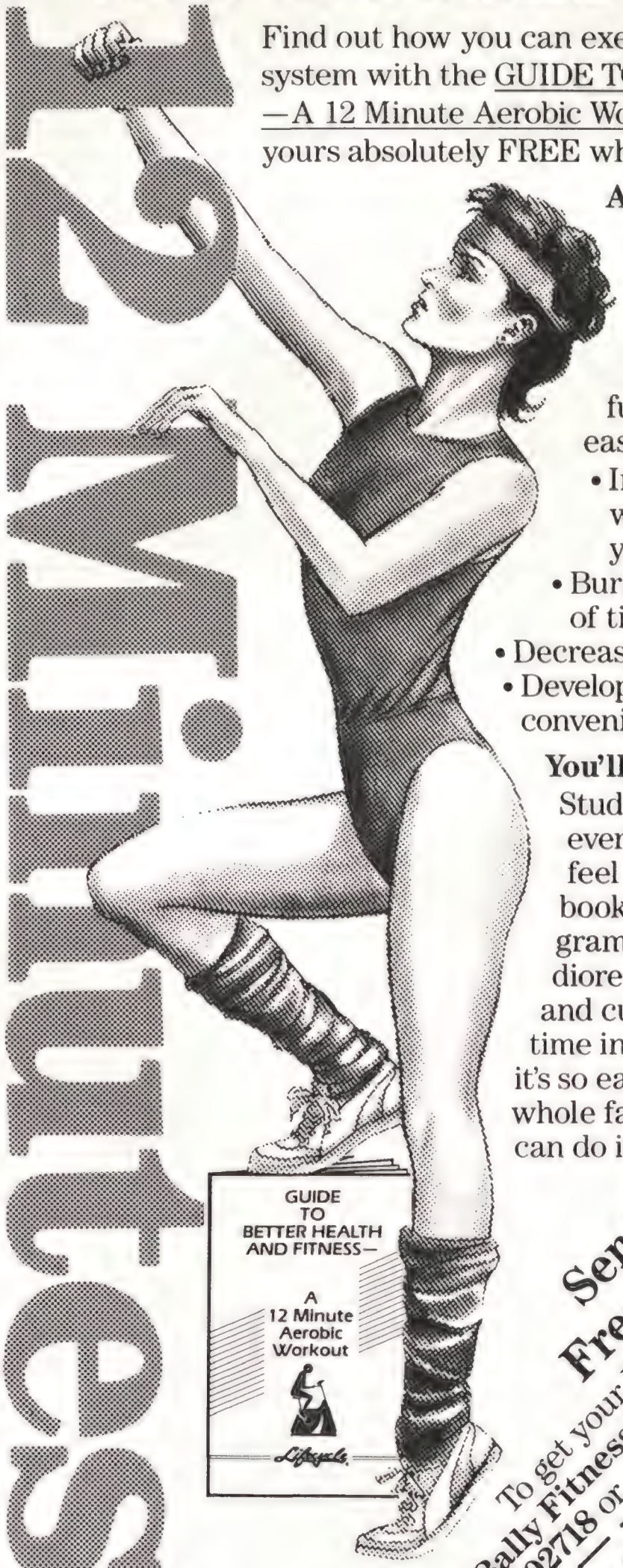
You don't talk numbers with L'Amour. We count too much, he believes, and we tyrannize ourselves with digits. In his youthful rambling days he was once hired as a ranch hand over two better-qualified men who happened to be in their 40s—too old—and the memory rankles. He has known many people who decided that it was time to die when they reached 75. Don't ask his age. "I conscientiously object to anyone telling his age," he declares firmly. "You can't judge people by age." Indirectness works better: "Are you older than Ronald Reagan?" "A little," he allows.

The trouble is that L'Amour's numbers are impossible to ignore. He has written 101 books, which probably equal the total lifetime output of any other 12 writers; more than 30 of his novels and stories have been sold to the movies; an estimated 182 million copies of his books are currently in print worldwide. L'Amour himself overcomes his antinumerical bias long enough to report that Bantam Books distributes more than ten million of his books in hard and soft covers each year.

The numbers of course translate into large houses, several cars, and lunches at the Polo Lounge in Beverly Hills, not far from his spacious hacienda-style house, but money has little to do with his remarkable productivity. "He just keeps going and keeps going," his friend Daniel Boorstin, the Librarian of Congress, says in amazement. "He never rests on his laurels." One reason is his belief that "nature has no place for nonproducers"; to stop producing is to die. Another is that he truly enjoys his work.

Flying West to write this story, Don Jackson was seated beside a man reading a paperback—by L'Amour.

Free Facts That Can Cut Your Exercise Time In Half



Find out how you can exercise your entire cardiorespiratory system with the GUIDE TO BETTER HEALTH AND FITNESS —A 12 Minute Aerobic Workout from Lifecycle.® This booklet is yours absolutely FREE when you mail in the coupon below.

A Challenging Workout in Only 12 Minutes

You can get an extensive cardiorespiratory workout for a longer, healthier life just by doing a special 12 minute routine a few days a week. This 16 page, fully-illustrated booklet tells about an easy, proven method that can help you:

- Improve your cardiorespiratory system without causing severe stress or strain to your heart
- Burn off calories in a minimum amount of time
- Decrease your permanent body fat
- Develop a trim, fit body from the privacy and convenience of your own home.

You'll Look and Feel Better

Studies show aerobic fitness helps alleviate everyday stress. It also helps you look and feel really good. Now, through this special booklet you'll learn all about a workout program that will significantly improve your cardiorespiratory system and cut your exercise time in half! And it's so easy, your whole family can do it.

Send for the Free Facts Today

To get your Free Booklet, return this coupon below to **Bally Fitness, Lifecycle, 9601 Jeronimo Road, Irvine, California 92718** or ***call toll-free 1-800-LIF-CYCL, Dept. 7E023***

Lifecycle® Send For Your FREE Booklet Today!

Please send me my FREE copy of the GUIDE TO BETTER HEALTH AND FITNESS—A 12 Minute Aerobic Workout by Lifecycle.®

Name _____

Address _____

City _____ State _____ Zip _____

Telephone (_____) _____

7E023

America's finest furniture at deep-discount prices, direct from North Carolina.

The finest brand-name furniture at the lowest possible prices. That simple idea has made Edgar B the largest direct-to-the-consumer furniture company in the U.S.

Choose from Henredon, LaBarge, Baker, Kittinger, Hickory Chair, Hekman, White of Mebane, Councill Craftsmen, Mount Airy, Link-Taylor and others we can't name here.

No matter where you live, Edgar B delivers, neatly unpacks and sets up your furniture—and absolutely guarantees your satisfaction.

Call for our prices on specific items or for our beautiful 224-page color catalog. Or mail the coupon.

Call toll-free during business hours for price quotes or catalog.

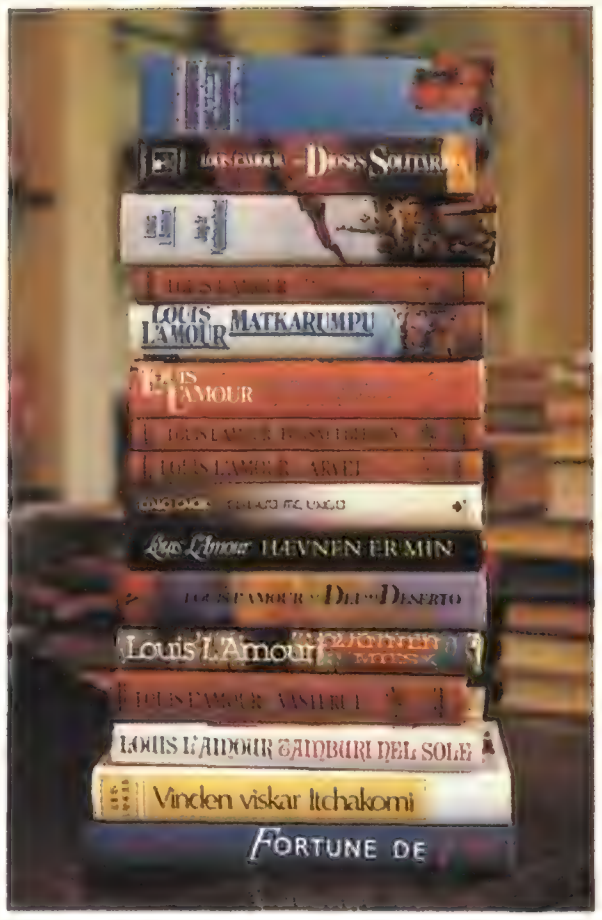
1-800-255-6589
In NC, 919-766-7321

Edgar B
Box 849
Clemmons, NC 27012

I enclose $12 for your 224-page color catalog of America's finest brand-name furniture.

Name
Address
City
State Zip
Phone ☐ Home ☐ Office ( )

30518023



A few L'Amour translations (he is read in 19 languages) are stacked in his hallway.

"I love to tell stories and I have a lot more to tell," L'Amour declares. "I can't imagine not working. He writes seven days a week. And when he finishes a book, as he does two or three times a year, he rolls a fresh sheet into the typewriter and launches into another the same day. A vacation from his typewriter, he says, would be an ordeal he couldn't bear.

L'Amour's hole card as a writer may be his natural affinity with his audience. "Writing is sharing," he says. "I'm working for the reader." He once wrote that his books are for the "people who do the work of the world, who struggle to make ends meet, who build, the people who *do*." His readers reciprocate: they send him family archives, genealogical records and manuscripts they hope he can use, sometimes addressing them only to "Louis L'Amour, Author, Los Angeles." "He writes as if he's talking to people just beyond the campfire of his typewriter," says Saul David.

Books surge and spill and twine through almost every room of his house. They march along one entire

日本刀
JAPANESE SWORDS
For Free Evaluation Sheet
TOLL FREE 800-435-5119
$200 $10,000 CASH PAID
Japanese Military Decorations & Oriental Porcelains Also Wanted
David E. J. Pepin—Member NBTHK, Tokyo, Japan
Dept. SI, P.O. Box 354, Grant Park, IL 60940

FARM VACATION

the vacation of your dreams!

Have you ever considered spending some time with your family on a real working farm? Michel Farm Vacations, of Harmony, Minn. thought that you might. We've put together an all inclusive package that puts you and your party with a host farm for the vacation you've been waiting for. Among the many leisure activities available is our guided tour of the MIDWEST'S LARGEST AMISH COLONY.

For a fact-filled brochure and information on other area activities, please contact:

MICHEL FARM VACATIONS
ROUTE #1 P.O. BOX 914
HARMONY, MINNESOTA 55939
OR PHONE (507) 886-5392

Michel Farm Vacations

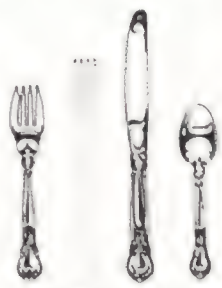
MISSING A PIECE OF YOUR PATTERN?

We can help you replace missing pieces of your pattern, add to the service you already have, or start your new collection.

We specialize in new & used flatware & holloware and have over 550 patterns in stock including obsolete, hard-to-find & current pieces at 55-75% off retail.

We buy sterling — *with a careful appraisal for maximum value.*

Pattern Shown: Chantilly by Gorham



Beverly Bremer Silver Shop

3164 Peachtree Road, NE / Atlanta, GA 30305
Phone: (404) 261-4009 / Open Monday - Saturday 10-5

A Capital Adventure

Gramp's

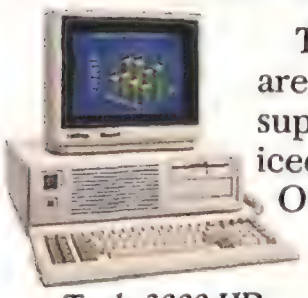
Exclusively for those 9 and 10 years old!

Unique 12-day live-in learning adventures start 31 May. At a wondrous age, History, Science, Art and Government become alive and exciting.

Brochure: 10501 Balls Ford Rd., Manassas, Va. 22110
Limited to 24 per session **Call 703 368-1286**

"Ok... But why Tandy Computers?"

"In a word...quality."



Tandy 3000 HD

Tandy® computers are designed, built, supported and serviced by Radio Shack. Our total commitment assures a high degree of product quality and, just as important, customer satisfaction long after the sale.

Quality-built in the USA. Our MS-DOS® personal computer line is made in America in our own manufacturing plants. We control quality, from initial assembly to completed and tested product.

Nationwide Support. Over 1200 Radio Shack Computer Centers are ready to help you choose the latest in computer technology, backed by quality support.

Tandy 3000 HL

Training and specialized software instruction is available at your place of business or ours, in 60 major market areas.

Tandy 1000 SX

We've got what it takes. Like commercial leasing plans. And service performed by technicians who work for the same company that manufactured and sold you your computer.

You expect quality . . . and you get it from Radio Shack.

TANDY COMPUTERS: In Business . . . for Business™

MS-DOS/Reg. TM Microsoft Corp.

Radio Shack®
COMPUTER CENTERS
A DIVISION OF TANDY CORPORATION

Introducing

THE WORLD'S FINEST MUSEUM REPLICAS

...CREATED BY POLAROID

Now Own Flawless Reproductions of the World's Great Paintings!
Breakthrough Replica Process of Astonishing Quality!
Each An Original...Created Directly From a Masterwork!

Now you can own the finest MUSEUM REPLICAS in the world!

BREAKTHROUGH...is the only word that truly describes the MUSEUM REPLICA COLLECTION! Polaroid has created a marriage of art and technology so astonishing...that every texture...every brush-stroke...every crack and paint chip in the original work is flawlessly reproduced!

PLUS...each MUSEUM REPLICA is truly an original...created directly from a masterwork...using a specially developed camera...and a remarkable ultra large format Polaroid film!

THE RESULT...replicas so beautiful...so authentic in every detail...so unlike any other reproductions you have ever seen...that you may not believe your eyes!

Send today for FREE details!

The MUSEUM REPLICA COLLECTION A35
20 Gurley Avenue Troy, New York 12182

☐ ***Yes!*** *Please send me FREE Details today!*

Name _____

Address _____

City _____ *State* _____ *Zip* _____

FREE TOURS FOR THE ASKING.

Our 52-page full color Adventure Guide takes you on tours through nine sections of Colorado with maps, sightseeing suggestions and special tips to help you plan your next vacation. It's part of our free Summer Adventure Planning Kit, which also includes a rebate offer of up to $50 when your Colorado travel plans include Continental Airlines. For your free kit, mail this coupon to Colorado Tourism Board, Dept. S57, Box 38700, Denver, Colorado 80238.

Or call toll-free: **1-800-433-2656.** Then call Continental to schedule your personal Colorado tour!

COLORADO
And no place else.℠

Name _____

Address _____

City _____ State _____ Zip _____

CONTINENTAL

For the lowest fares and most flights to Colorado.

wall of the large living room and collect in piles on every flat surface. They stand guard in the home gymnasium (p. 168) where he tries to work out daily, and gather in stacks atop the glass table in his sun-washed family room. They parade in shelves along the hallways and take over completely in his cavernous bedroom. And he knows where everything is.

"These are all on archaeology," he says, indicating several shelves in the living room. "Here's one on the fall of the Byzantine Empire and—I love these volumes—*Leland's Itinerary in England and Wales.*" But there's not much fiction: "I only read fiction on planes," he explains. Two long shelves hold the myriad works of Louis L'Amour. "It makes me feel good to see them, but I'm more conscious of what I haven't done."

When Boorstin, the author of a recent book on exploration, visited L'Amour, he was delighted to discover the "best collection of Marco Polo books I ever saw in private hands." A map case in a broad, sloping corridor leading to his workroom contains nautical charts and a complete set of U.S. topographic maps. Beyond are his trophies—awards, keys to a score of cities, framed honorary degrees—"That's a thrill for a guy who didn't get out of the tenth grade"—and a white football signed by his fans who play for the Dallas Cowboys.

L'Amour is expecting his movie agent—he has no literary agent—but when he answers the door it turns out to be a laundry deliveryman. "Oh, I thought you were my agent," he blurts out. "I'd like to be, Mr. L'Amour," the man replies with a smile. Later, he leads the way into his workroom—"A writer's dream room," he calls it—where a capacious desk sits between a fireplace and a window beyond which Sunset Boulevard traffic roars. "It doesn't bother me, it's like the sound of the sea." Teetering piles of papers, magazines, pamphlets and clippings are stacked on the floor, tables and desk. The floor-to-ceiling

Asia. The way you always dreamed it would be.

Emerald Buddhas. Floating markets. The Stone Forest. The Land of Smiles. A tour of the Far East will dazzle your senses like no dream.

Choose from a host of deluxe escorted tours to China. We also offer escorted and independent tours to Thailand, Japan, Korea, and even Bali. Complete air/land packages to Bangkok begin at just $1,099.*

And behind every tour, you'll find Northwest's 40 years of experience to Asia. Plus comforts no other U.S. airline offers you–like a spacious 747 on every flight.

So if you're looking for the experience of a lifetime, look to the airline with a lifetime of experience. Northwest, the number one airline to Asia. Call your travel agent or Northwest at (800) NWA-TOUR.

I'd like to know more about the following: SM5

☐ Around The Orient ☐ China ☐ Thailand ☐ Japan
☐ Independent Orient Arrangements ☐ Hong Kong

Name_____

Address_____

City/State/Zip_____

Send to: Northwest's Asia, P.O. Box 1337, Norwood, MN 55383

*Introductory air/land package price to Bangkok is for travel originating from Los Angeles or San Francisco. Price listed is per person based on double occupancy and is subject to change.

© 1987 Northwest Airlines, Inc.

Look to us.

NORTHWEST

shelves contain about 8,000 books. "I'm in my own world here, I can transport myself to another time and place and put myself there." He is not fussy about where he works. Once, for a *People* magazine story, he composed several usable passages while at a desk set up on a traffic island on Sunset Boulevard. "The funny thing was that a guy leaned out of a truck and said to me, 'You've got to be Louis L'Amour, right?' "

L'Amour grew up as the youngest of seven children in "a house full of books" in Jamestown, North Dakota. His father was a veterinarian and farm-machinery salesman of French-Irish extraction who Anglicized his name to La Moore, a change that young Louis reversed when he set out on his own at 15. He aspired to write from childhood—one brother became a journalist and two sisters also wrote—and after souring on school, he embarked on a 20-year odyssey of Jack Londonesque adventure that makes his book-jacket biography as readable as his novels. A six-footer in his teens, young L'Amour baled hay, worked as a circus-elephant handler, hoboed to New Orleans and shipped out as a seaman at 16.

He noticed everything, read constantly, went everywhere—China, India, Singapore, Europe, Egypt, South Africa. He knew how to box and fought professionally between voyages. "I got $25 for my first fight," he recalls. "My biggest purse was $1,800 in Singapore—I won by a knockout in seven rounds." In Shanghai he was once matched with an enormous 250-pound Russian who succumbed to a L'Amour belly punch.

He saw criminals beheaded in China, biked across India following the trail of Rudyard Kipling's character Kim, and survived a shipwreck in the West Indies—a story he's saving for his autobiography. "You soften the hard edges of memory," he says now, "but there was a time when I could handle myself on the toughest streets in the world—Malay Street in Singapore, Blood Alley in Shanghai, Grant Road in Bombay, District Six in Capetown."

L'Amour, the rover, returned frequently to the United States, where he worked as a miner, lumberjack and ranch hand, always moving on after a few weeks or months. "I did a lot of mining-assessment work, a few days at a time for miners with claims. I was all over the West that way. Once I met an 80-year-old Indian who was supposed to have killed several men. He taught me about herbal medicine. He was shrewd. He got a couple of college boys to grubstake him with $200 and then scared them so much talking about the men he murdered that they took off."

The worst times were when he was "on the beach"—on shore, in San Pedro, California, between ships and broke. "I slept in boxcars and under piles of lumber, and took jobs no one else wanted. I was 18 and looked 24. There were several times I went three and four days without eating. I didn't beg or steal, just went without. I'd like to recover for my readers what it's really like to be hungry. I have a penchant for stories about survival, lessons in survival. I've been a survivor most of my life." L'Amour chronicled some of his experiences on the beach in San Pedro in his 1980 book *Yondering*.

Wherever he rambled, he never swerved from his vision of himself as a writer. He submitted stories to magazines during his knock-around years and finally began to sell—a boxing article, then a piece of poetry. By the late 1930s he had published his first book, a collection of poems called *Smoke from This Altar*, and was contributing regularly to Western pulps. "I needed quick checks, and the pulps paid in 11 to 14 days," he remembers. When World War II broke out, he served two years stateside and two years overseas.

He returned to writing after the war, besieging editors with adventure tales, sports stories and detective yarns as well as Westerns. When the pulps suddenly folded he was hired to write Hopalong Cassidy novels under the name Tex Burns, an episode he would just as soon forget. But he found his home range as a writer—sagebrush and box canyons, the *Kiowa Trail* and *Rivers West*, the lonesome land

With his wife, Kathy, L'Amour renovated this Colorado ranch home, which was built in the era his books vividly re-create.

Replace luck with something more reliable.

Luck is sometimes "dumb." Barron's is the opposite extreme, providing the forecasts and analysis of Wall Street's most insightful observers.

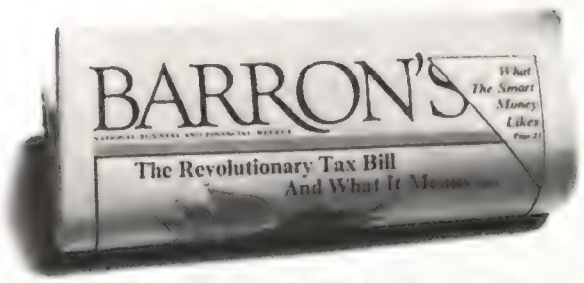
Luck is notoriously bad at repeat performances. Barron's has shown up every week for over 65 years.

Luck is blind. Barron's is far-sighted—spotting growth potential and undiscovered values before the market discovers them.

Luck is built on hope. Barron's is built on information—the timeliest, most comprehensive data available on stocks, bonds, real estate, art, coins and a variety of other markets throughout the world.

Finally, luck has an uncanny way of favoring the well-informed. Which suggests that maybe, just maybe, you won't have to choose between luck and Barron's after all.

Judge for yourself this weekend. Pick up Barron's at a newsstand. Or subscribe by calling* 1-800-345-8000, Ext. 166.



HOW THE SMART MONEY GETS THAT WAY.

*IN THE CONTINENTAL U.S. ONLY. ©1987 DOW JONES & COMPANY, INC

China

Four great ways to see the China of your choice.

Top-of-the-line to more affordably priced, our four great programs with nearly 50 itineraries and over 1,000 departures let you see the best of China at the pace and price you want. Tour China, Hong Kong, Japan, Tibet, Southeast Asia, even cruise the Yangtze River on our fully escorted programs, all featuring the must-see Golden Route cities. Choose China Experience® with the newest, luxury hotels, value-priced China Focus,® an all-China Escapade,® or new deluxe China Vistas.® As #1 to China and the Orient, Pacific Delight delivers the most quality, value and variety. Send for our color brochures. Then see your Travel Agent.

GO WITH THE REAL EXPERTS

Pacific Delight Tours, Inc., 132 Madison Avenue, New York, NY 10016 SM5
(212) 684-7707 (NY) or toll-free: (800) 221-7179 (U.S. & Canada)

Please rush me your 1987 China Vacations brochures.

Name_____

Address_____

City_____ State_____ Zip_____

My Travel Agent is_____

PACIFIC DELIGHT TOURS, INC.

To carry anything less is a burden.

In life, first impressions are important. In business, they're critical.

In every situation, the unmistakable style and quality of this Mark Cross woman's briefcase will serve as a proper introduction. Practical and durable, this case effectively combines large capacity, ease of access and security. And the matching Courier bag is perfect for a day on Wall Street or a weekend in the country.

The Signet Edition briefcase, $360. The Courier bag, $365.

Mark Cross, 645 Fifth Avenue. Call 1-800-262-0016 for store locations nationwide.

MARK CROSS ESTABLISHED 1845

© 1987 Mark Cross, Inc.

of saddle tramps and gunfighters. L'Amour would become the laureate of the lariat.

He knew exactly how to go about it. "No one ever went into writing with a more calculated career attitude than I did," he says. Loitering around bookstores, he listened to customers' requests and noticed that they often had trouble remembering the name of an author they liked. "I concluded it was important to keep your name in front of the public," he says. "Never give them a chance to forget you." He also decided that a novel's action should start on page one, line one. "Too many writers talk about what they're going to say before they say it. There are lots of other things competing for people's entertainment time —they don't have to read my books. You've got to start with something happening."

He learned how to gather the raw material that yields story ideas and the authenticity he prizes. He sought out old gunfighters and outlaws ("I knew 30 or 35 of them personally"), mined the files of small-town newspapers and interviewed ranchers. "They'd be standoffish at first, but I'd keep talking and they'd warm up and tell me wonderful stories. I heard that when Zane Grey traveled the West he always 'made his own campfire,' kept his distance. I wasn't like that, I was one of them."

Saul David vividly recollects their first meeting in the 1950s, when he was editorial director of Bantam Books. "That was the heyday of the paperback Western. We had lost Luke Short, our Western star, and I was in California looking for a new one, staying at the Beverly Hills Hotel, naturally. I got a call—the word was out that I was in town—and a voice said, 'This is Louis L'Amour, you've never heard of me but I want to see you right now.' He came up with an envelope, made a pitch and told me to read his samples. He said he was going to be the next great Western writer and we'd do well to take him

One of 17 stages involved in producing the new edition from Audubon's original plates for The Birds of America.

The first opportunity to acquire prints direct from John James Audubon's own plates since 1838.

In the Ornithology Department of the American Museum of Natural History, there is one room which is only open by special arrangement.

It is called the Audubon Hall.

Among the display of Audubon's watercolors, prints, drawings, guns and buckskins, nothing is more treasured than the artist's copper plates that hang on the walls.

To mark Audubon's bicentennial, the Museum has decided to issue a new edition of six prints struck from these original double-elephant sized plates, last used in the early 19th century.

The first new edition since the 1830s.

The six prints in the new edition are: *the Wild Turkey, Male; the Female Turkey and Young; the Snowy Owl; the Mallard Duck; the Canada Goose; and the Great White Heron.*

Five years ago, the Museum began looking for a firm which retained the old 19th century skills of copper plate printing and coloring.

After a long search a firm was selected, Alecto Historical Editions of London.

An edition which is closer to Audubon's intentions.

What may surprise many who appreciate Audubon's work is that the artist, although delighted with the superb quality of the original engravings, was terribly disappointed with the coloring of many of the prints.

Indeed in one of Audubon's letters, he writes to his printer Robert Havell;

"*These recent proofs are no more like my drawings than a chimney sweep is to your beautiful wife.*"

The Museum and Alecto therefore went back to Audubon's original watercolors, notes, letters and even bird specimens to produce this edition.

The results have not only surpassed our expectations but have also met with outstanding recognition among curators, art historians and Audubon experts.

The well known British naturalist David Attenborough wrote; "*These new impressions of the 150-year-old plates could well be judged to be a finer representation of Audubon's intentions than any produced during the artist's lifetime.*"

'Living Bird Quarterly', a scholarly journal published by Cornell University commented; "*Many experts are judging the new edition to be superior to Havell's original prints.*"

A very limited edition.

Because of the extremely high value of the original plates and the possibility of stress to them, the Museum is limiting the edition to just 125 sets worldwide.

The plates will then be retired for at least half a century.

The set of six prints cost $36,000. (A 19th century set from the same plates fetched over $145,000 at auction at Sotheby's in 1983.)

Already most of the edition has been claimed, the majority of the sets going to important collections in North America including the Library of Congress, the Boston Public Library, the McIlhenny Collection and the National Library of Canada.

Some sets have also been purchased by major corporations, including Dow Jones and the Southland Corporation.

We are now delighted to be able to offer the few remaining sets to individuals throughout the nation.

If you would like to receive a prospectus, please write to the Museum at the address below or call Sherry Goodman on (212) 245 5753.

The prints will be available for private viewing in major cities throughout the country during the next three months.

The plates will be coming back to the Museum where they will remain untouched for at least 50 years.

THE
AMERICAN MUSEUM
OF NATURAL HISTORY
NEW YORK

Audubon Portfolio, Room 1, Central Park West at 79th Street, New York, N.Y. 10024.

Maupintour

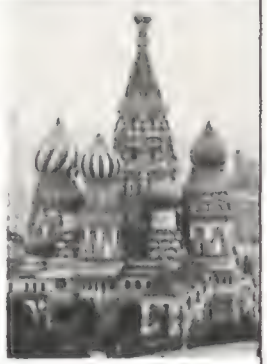
Discover a grand style of escorted travel. Small groups, professional manager, one price covers everything. Treat yourself to the best!

SCOTLAND

17 days in depth. Isle of Skye, Edinburgh, the Highlands, Orkney and Shetland Isles, Loch Lomond, Aberdeen, Loch Ness, Glasgow.

RUSSIA

Eastern Europe Capitals, Russia and China, Cities of Central Asia, Scandinavia/Soviet Union, Russia by Motorcoach, Art Treasures.



THE TYROL

9 days. A week in the luxurious Alpine *Interalpen Hotel* with day trips to Innsbruck, Merano, Salzburg, Liechtenstein, Oberammergau.

FREE TOUR BOOKS. For a copy of Maupintour's ☐ *British Isles,* ☐ *Russia,* or ☐ *Europe* (The Tyrol) books, ask your travel agent, call or check box and mail to Maupintour, 1515 St. Andrews Dr., Lawrence, KS 66046.

quality escorted tours since 1951 Maupintour

name

address

city/state/zip

my travel agent *ssn-srt-7*

Telephone toll-free... **800-255-4266**

Ex-prizefighter L'Amour works out with 100-pound bag, amidst still more books.

on. I read it while he waited. It was *Hondo,* and it knocked me out. I signed him to a long-term contract on the spot." David's boss in New York had doubts about their new author's name—L'Amour on a paperback sounded like "a Western written in lipstick," he said—but no one had grit enough to ask him to change it. "I didn't want to get punched out," David explains.

From his first novel, L'Amour has connected with readers primarily through his storytelling talent and his recognition of the continuing power of the West and the frontier in our imagination. "I think every American has a bit of the frontier in him, a feeling for it," he says.

L'Amour tells his stories in a direct, fast-moving style, shorn of interior monologues and elaborate descriptive passages. Though his villains commonly come to a violent end, he shuns vivid depictions of violence, preferring to concentrate on the suspense that he usually establishes, true to his convictions, on the first page. L'Amour heroes are often in a fix when we meet them, and their troubles worsen fast. *Jubal Sackett* starts this way:

"A cold wind blew off Hanging Dog Mountain and I had no fire, nor dare I strike so much as a spark that might betray my hiding place. Somewhere near, an enemy lurked, waiting. Yesterday morning, watching my back trail, I saw a deer startle, cross a meadow in great bounds, and disappear in the forest. Later, shortly after high sun, two birds flew up suddenly. Something was following me."

The critics, who generally ignored L'Amour until his books began appearing in hard cover, fault him for stilted dialogue and one-dimensional characters while praising his narrative drive and historical accuracy. L'Amour's characters are never profane, explicit and even implicit sex goes unmentioned, and his heroes, like their creator, are often extraordinarily well read for all their *machismo.* In recent novels his Western backdrops have given way to exotic venues like Medieval Europe (*The Walking Drum*) and Siberia (*Last of the Breed*), but the fast-paced story lines as well as the historical validity have remained constant. "If my book is set in 1600, I write so that someone who lived then would recognize the road I'm describing," he says. "I want the details to be right."

There was a time when critical neglect riled him. "If you write about a bygone period east of the Mississippi River it's a historical novel," he once grumbled. "If it's west of the Mississippi it's a Western, a different category"—different and disparaged, he might have added. But he has reached a mesa where war parties can't hurt him. "There are the remains of a small chip on his shoulder about the critics, but that is all," David says. L'Amour notes that Shakespeare and Dickens were both derided as lowbrow hacks by contemporaries, and he is fond of an Arabic proverb he applies to critics: "The dogs may bark, but the caravan goes on." He rejects generic pigeonholing and he declares unequivocally that his work is literature: "I don't give a damn what anyone else thinks, I know it's literature and I know it will be read 100 years from now."

The elegant touch

New designs, crafted to give you accessible luxury

Cristal
J. G. DURAND
France

DURAND INTERNATIONAL
Wade Blvd., Millville, N.J.

Beauty and Inspiration for you to live with and friends to admire. Hand-finished oxolyte, resembling Carrara marble in appearance, weight and feel. 15″ for $129 ppd; 12″ for $111 ppd. Marble bases. Check, Visa, MC. Unqualified guarantee. **New art-book color catalog $5 (refundable with purchase) 230 items. Visit our Seattle Gallery.**

ELEGANZA LTD. *Importers of Fine Statues*
Magnolia Village • 3217 W. Smith St. #53
Seattle, WA 98199 • 206-283-0609

SOLID BRASS
THE WALL SWINGER

$19.99
Add $4 Shpg. ea.

Factory to you . . . we make the world's greatest values!

3-way light

An essential addition for any room in your home. This functional and versatile lamp extends two feet and comes complete with 11½″ dia. textured white shade. Your choice of polished brass or mellow antique finish (please specify). *Satisfaction a promise.* Check, VISA, or Mastercard. Order #90.

Nothing else looks like hand polished solid brass!

ROBELIER
1500 South 50th St.
Phila., Pa. 19143
Dept. ST5-7

(215) 729-2240
with luxe cord cover

Quantity	Finish	Price Each	Total
#90		$19.99	
☐ Mastercard	PA res. 6% tax		
☐ Visa	shipping ea.	$4.00	
☐ Check		TOTAL	

_____
Signature _____ Ex. date _____
Name _____
Address _____
City _____ State _____ Zip _____
AK, HI, PR, VI—addt'l $3. shpg.

To satisfy his readers both current and unborn, L'Amour is up at 6 and at the typewriter by 7 every morning, batting out the five to ten pages he produces daily. He halts at noon and resumes for an hour and a half after lunch before he quits and heads for his gym to lift weights and pedal a stationary bike. He never works from a plot outline, preferring to improvise as the story unfolds. "I start with a character and a situation, but I don't know what's going to happen until I write it. Sometimes things happen that surprise me."

He believes he may only now be achieving "full command" of his craft; indeed, his current books are among his best. "It's like a ballet dancer who learns technique and becomes a superior technician, and then the change comes," he says. "The dancer becomes the dance. It's not the technique anymore, the music is part of her. I feel that as a writer, that it's all there now —I am the writing."

Even at his Colorado hideaway, Louis L'Amour can't stop writing. He can't wait to know what will happen next.

LIVING HISTORY IN ONTARIO.

Old Fort York

Upper Canada Village

The Mill of Kintail

Uncle Tom's Cabin

Old Fort William

Ontario is full of places where history comes alive. Places where you can get all the flavour of life in days gone by.

At Upper Canada Village in Morrisburg, you'll find yourself back in the 1800's in a restored village of the period. The Mill of Kintail in Almonte is just one of many picturesque historic sites you can visit in Ontario.

At Dresden, visit Uncle Tom's Cabin, home of the Rev. Josiah Henson who inspired Harriet Beecher Stowe to write her immortal novel.

Old Fort William in Thunder Bay will take you back to the 1700's, the days of the Voyageurs. Experience the life of a British soldier of the 1800's at several completely restored forts in Ontario.

Come on up to Ontario, Canada and experience history in the flesh. The U.S. dollar is strong in Canada, so you'll get more of Ontario's past, and present, for your money.

For more information about Ontario's historic sites, call us TOLL FREE at 1-800-268-3735. One of our travel counsellors will be happy to help you plan your trip through history.

ONTARIO *incredible!*

In ancient Egypt the Sacred Ibis symbolized Thoth, god of wisdom. Sculptured over 4,000 years ago, the original is a treasure at the Louvre in Paris.

Artisans Guild now offers a museum quality 4" replica in solid cold cast bronze plus a catalog of outstanding historical collectibles for $25. Satisfaction guaranteed or full refund.

Toll free Visa, MasterCard phone orders:
U.S. & Hawaii **1-800-231-4921**
California **1-800-231-6334**

ARTISANS GUILD INTERNATIONAL 1-11
1005 S. Santa Fe Ave., Los Angeles, CA 90021

☐ Sacred Ibis $25.00 ☐ Catalog only, $5.00 (apply to first order)

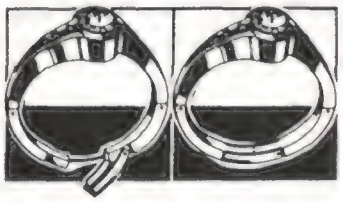
Name _____

Address _____

City, State, Zip _____

Our Safety Clasp makes it safe, snug, secure.

• **Rings won't twist with new Finger-Fit!** • **Rings slip on and off easily even over swollen knuckles.**



Open to slip over your knuckle

Closed Locks for snug fit

Jeweler can attach to any woman's ring, old or new. Opens 3 sizes, snaps closed for snug fit. 14K yellow or white gold or platinum.

Thousands of satisfied customers coast to coast! Mail coupon for name of Finger-Fit jeweler near you.

FINGER FIT ...For a Comfortable Fit!
DEPT. SM-05, BOX 640, PLYMOUTH, MI 48170

NAME _____

ADDRESS _____

CITY, STATE _____ ZIP

Book reviews

Boswell: The English Experiment, 1785-1789
Edited by Irma S. Lustig and Frederick A. Pottle
McGraw-Hill, $24.95

Until the 20th century, James Boswell lived on the fringes of literary history as the scribbling Scotsman who managed to jot down Samuel Johnson's coffeehouse conversation. Naturally, it was only sheer luck that he produced the greatest of English biographies; anyone might have done it with such a perfect subject, a legendary talker—half Falstaff, half philosopher—who could speak more sense over tea than most people in a lifetime.

But after a century of such blatant undervaluation, Boswell's stock has shot up dramatically during the past 50 years. In the 1920s his private papers were discovered in Malahide Castle; in 1950 Boswell's *London Journal*—expertly edited from the new-found material by Frederick Pottle—stormed onto the best-seller lists. In its pages readers found an unbuttoned Boswell, a rowdy and randy young man, who in a single evening might dine with a lord, make eyes at his lady, drink way too much port or negus or ale or brandy, and then cruise St. James's Park for a buxom wench. Or even two. Critics began to acclaim him the greatest diarist since Pepys.

In succeeding years and journals Boswell traveled the Continent (where he traded quips with Voltaire and sexual advances with Rousseau's mistress), toured the Hebrides with Johnson, married his own cousin, assumed his position as laird of the family seat at Auchinleck. In *The English Experiment, 1785-1789* (12th in the series) he has grown middle-aged; his mentor, Dr. Johnson, is dead; and he finds himself suffering the deepest depression, "a dismal apprehension that I should never again be well or have any relish of anything." There is, indeed, not much to be cheerful about. In the four years chronicled here, Boswell vainly tries to establish himself as a lawyer in England, toadies up to the awful Earl of Lonsdale for preferment, watches his wife gradually die of consumption. "Oh!" she exclaims pitiably at one point, "I am terrified for the dark passage."

Hardly a paragon in his personal life, Boswell grossly neglects his family and responsibilities, but for modern readers makes up for everything with brilliant pen portraits and anecdotes. The immensely wealthy Lonsdale is heard to say, "If I were a rich man, I would have a bit of fish every day." A Scottish laird grumbles that Johnson failed to attack him in Boswell's account of the Hebridean journey: "It looks as if one was nobody," he complains. Our hero meets William Mason, identified in a footnote as "a minor poet and dramatist, whom [Thomas] Gray liked to call Scroddles." (The notes, as usual in this superbly produced series, are as much fun as the text and for most readers crucial to understanding 18th-century customs.)

At other times, the errant Boswell receives a letter from Robert Burns, visits with a desperately ill Adam Smith and even tries to seduce poet Anna Seward, a.k.a. the Swan of Lichfield. He finds "Mr. Horace Walpole at home just the same as ever: genteel, fastidious, priggish." There are brief vignettes of Edmund Burke speaking "astonishingly well" for the impeachment of Warren Hastings, of Gibbon sitting "snug," of Boswell's little boy James so excited by a song in a play that his father shouts "with a stentorian voice" until it is sung again.

For many readers, though, the entry that will mean the most is that for Monday, June 5, 1786: "At home all forenoon sorting materials for Dr. Johnson's *Life*." This is the first mention that Boswell has started work on his masterpiece and for the rest of the journal periodic entries read simply: "Worked on *Life*." Here, surprisingly, among the scalawags and eccentrics, a real hero quietly emerges: Edmund Malone. The greatest Shakespeare scholar of his day, Malone also becomes midwife to the biography, pushing, prodding, hounding his friend to keep working. By 1789 the initial draft

ROMANCE
On A Grand Scale
Grand golf, tennis, and water sports by day. Fine dining by night. Then a quiet stroll together. And a moment to pause over the sapphire waters of a spectacular free-form pool. Indoors and out, surroundings are designed with taste and elegance across this vast Florida oasis. No wonder so many who discover Grand Cypress Resort rediscover romance on a grand scale.
GRAND CYPRESS RESORT
ORLANDO FLORIDA
To experience The Villas of Grand Cypress or the Hyatt Regency Grand Cypress, call toll-free 1-800-835-7377.
Grand Cypress Resort is owned and managed by Dutch Institutional Holding Company, Atlanta, Georgia, USA.
Member of THE GRANDE COLLECTION OF HOTELS

Traditional Irish Cottage for Sale

Picturesque 100 yr. old stone slate roof cottage, perfect for couple, comfortably furnished and modernized in secluded mountain glen near Killaloe and Shannon River in County Clare ½ hour to Shannon Airport. Caretaker available

£24,500 Irish

WRITE: Irish Cottage
2735 Overseas Highway
Marathon, Fla 33050

Mysterious T-Shirts

Stonehenge, Machu Picchu, Easter Island
Silk screen on white, silver, and tan T-shirts
SIZES: S, M, L, XL. **T-SHIRTS** $11, 3/$30
SPECIFY SIZE/COLOR/PICTURE
SHIP $1 per piece All Items Refundable
LOST WORLDS
Box 344, Dept. S East Rockaway, NY 11518

25 FREE PAIRS

Wright Arch Preserver® Shoes

Yes! A FREE pair of America's finest men's shoes will be given to 25 people who answer this ad by June 30. We will draw 25 names from those who send for our FREE catalog. Each will choose a pair of WRIGHT ARCH PRESERVER SHOES priced up to $149! Mail this coupon for FREE catalog and YOUR chance to win these famous shoes.

Executive Shoes, Dept. 457, Box E
Rockland, MA 02370

Enter me in the Free drawing, and send Free catalog of Wright Arch Preserver Shoes.

Name (PLEASE PRINT)

Address

City State Zip

Have you ever worn Wright Shoes? yes ☐ no ☐

MAIL THIS COUPON TODAY!

PRICE BREAKTHROUGH: $75.

Diplomatically speaking...

The best language course for the money.

For half the cost others charge for the same training course used by U.S. diplomats for over 20 years, you can now master a foreign language.

Listen. Repeat. And learn to speak—French, Spanish, Italian and German—with total fluency in a matter of weeks.

$75.

BARRON'S FOREIGN SERVICE INSTITUTE LANGUAGE SERIES:

- Twelve 90-minute cassettes, plus a comprehensive textbook.
- Spoken drills and written exercises for mastering grammar, vocabulary, pronunciation and conversation skills.
- A programmatic sound-system of the language in easy-to-follow grammar and vocabulary-building units.
- A total 18 hours of uninterrupted spoken language instruction.
- All yours for an incredibly low, *$75.00.*

Let Barron's transform your cassette player into a portable language lab. It's the fastest, easiest and most economical way to learn a new language. And compared to what's out there, that translates to an incredibly good deal.

☐ I enclose $75.00 plus $5.95 postage and handling or money order for each course. Please send:
☐ French (7321-5) ☐ German (7352-5) ☐ Italian (7323-1)
☐ Spanish (7325-8)
Charge my ☐ Mastercard ☐ Visa ☐ Amex ☐ Diner's
Card No. Exp. / /
Signature
Name
Address
City State Zip
30 Day Money Back Guarantee N.Y. Residents add sales tax
Call Toll-Free (800) 645-3476 (in NY: 800-257-5729)

BARRON'S
Dept. 5357
113 Crossways Park Drive
Woodbury, NY 11797

A4804

is done and the stage readied for the next and last volume of Boswell's journals: the triumphant publication of the *Life of Johnson* and its author's final unhappy years.

Michael Dirda
An editor at *Washington Post Book World*

A Life In Jazz
Danny Barker
Edited by Alyn Shipton
Oxford University Press, $19.95

On Saturday nights at the Animal Hall in New Orleans, the dancing always ended in a fight. Sometime after midnight, Long Head Bob's Social Orchestra would play the slow, slow drag blues and the crowd—stevedores, fishermen, field hands and factory workers tanked up on cherry-flavored raw alcohol—would invariably break into a brawl that lasted until the police wagon arrived. At country dances in Mississippi, the moonshiners would bring gallon jugs of whiskey and the sheriff would sit in the doorway, guns on the table, mule wagons outside.

Those were the early days of jazz, guitarist Danny Barker recalls, before the sophistication set in.

When Barker moved north in 1930, he found a different scene. The clubs in New York jumped all night long. At Harlem cabarets like Pod's and Jerry's, the entertainers were still onstage as children were on their way to school. Duke Ellington's band might play a half-dozen shows at the Paramount Theater

Barker: "I was told that I should write some truth . . . of many jazz subjects."

downtown and then head for Harlem for three more. On Barker's first visit to the Rhythm Club, in midafternoon, he found "a wild cutting contest was in progress and sitting and standing around the piano were twenty or thirty musicians, all with their instruments out waiting for a signal to play . . . ." In the crowd were jazz celebrities like Benny Carter, Don Redman, Chick Webb; Fletcher Henderson, seigneur of the big-band era, was shooting pool and ignoring the music.

It was a long way from the simplicities of New Orleans.

The Southern city still wielded a compelling musical influence, though, in the person of New Orleans trumpeter Louis Armstrong, whose playing had set the shape of jazz. Barker tells of going into a Harlem bar one sub-zero day and finding "a half-dozen noted trumpet players, stripped to the waist, bare-chested, sitting in a circle by a wide-open window. The cold air was swishing snowflakes on them . . . . What they were doing was trying to catch colds" so they would sound as rasping as Armstrong.

Barker spent 35 years as a New York musician, eight of them with the famous Cab Calloway orchestra. He also recorded with his wife, singer Blue Lu Barker, played at hockey games, accompanied Mae West on Broadway and strummed chords for Dizzy Gillespie's early experiments in bebop.

The best parts of *A Life In Jazz*, however, deal with his boyhood. His grandfather, Isidore Barbarin, played alto horn in the Onward Brass Band, one of the classic marching outfits that accompanied New Orleans funerals, and the young Barker followed burial parades the way boys in other cities might follow baseball. (He calls a New Orleans funeral the "greatest real-live free show on earth"; he even reproduces a sermon for a departed sinner.) By the time he was 12, Barker was leading his own spasm band—kazoo, ukelele, suitcase and other makeshift instruments—and playing in bars.

In 1965, fed up with scraping by up North and dismayed by racial friction, Barker went home. He helped arrange New Orleans' first international jazz festival and got a job in the local jazz museum.

But the "New Orleans that was an exciting living experience to me has largely evaporated," he laments, and its jazz has become old folks' old-time music, too often played by "ham fat musicians." The only stirring sounds are in the black churches, he says. So much for the state of the art in the city that taught the world to swing.

David Lancashire
Globe and Mail, Toronto

The Fatal Shore
Robert Hughes
Knopf, $24.95

In the first 80 years of Australia's existence as a colony, from 1788 to 1868, England exiled some 160,000 men, women and children to the "Fatal Shore," a bitter beginning that even today is seldom mentioned in polite Australian conversation. If "transportation" cannot be forgotten, the logic goes, at least it can be ignored.

Robert Hughes' brilliant and devastating history clarifies some reasons for this reticence. It is hardly a prudish attempt to hide a few bad apples in the ancestral orchard. In fact, many of the crimes the reluctant pioneers had committed were trivial. Nor does it reflect some vestigial belief in the heredity of criminal nature.

R E L A X
On A Grand Scale
Spirited tennis on Har-Tru courts. Satisfying golf on a Scottish-style course designed by Jack Nicklaus. The recreational opportunities at this vast, world-class resort are seemingly endless. And in late afternoon, it's time to just sit on the verandah of a generously sized, secluded villa. It's time to relax in grand style. At The Villas of Grand Cypress Resort.
To experience The Villas of Grand Cypress, call toll-free 1-800-835-7377.
Grand Cypress Resort is owned and managed by Dutch Institutional Holding Company
GRAND CYPRESS RESORT
ORLANDO, FLORIDA

Even though the colony's founders were handpicked "by the finest judges in England," Australia today is "one of the most law-abiding societies in the world." Australians have been shamed by their history, Hughes' study implies, because their ancestors were co-opted by the convict system.

The diabolical key to transportation lay in assignment. Upon arrival, convicts were assigned to labor for either the government or for a free settler. Since there were few other workers to be had, settlers were eager to get assignees. The government was equally eager to avoid the expense of feeding and housing their charges. The practical result was to transform the majority of Australians—free immigrants, native born and even emancipated prisoners—into wardens.

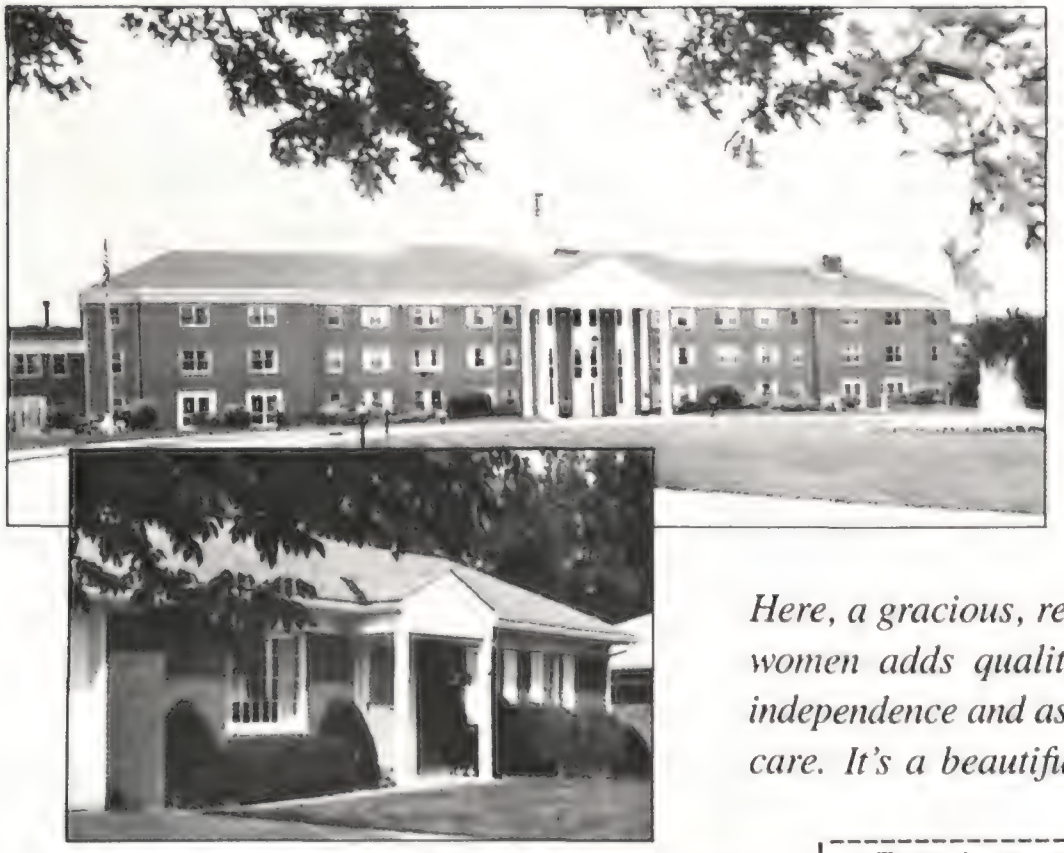
Transportation, Hughes tells us, was invented as a doomsday weapon against the wave of crime and class conflict precipitated by England's Industrial Revolution. Even hanging had failed to deter criminal behavior. Instead of inspiring terror, it became a bizarre theater of defiance for the impoverished masses, who would bellow in approbation as unrepentant offenders sauntered boldly up the gallows steps. One brash fellow picked his hangman's pocket. And after the American Revolution, Britain's destitute could no longer be sent across the Atlantic as indentured labor.

So in 1787 the British government sent a fleet full of convicts to the antipodal lands recently discovered by Captain Cook. Their scheme was simple—the unwilling colonizers would work or starve. England would rid herself of her convict "class" and at the same time gain a new land to replace the one that had just been lost. The scheme looked perfect, on paper.

The reality of transportation proved something else. The voyage might take as long as a year, and life aboard the prison ships could be unimaginably horrid. (In a nadir of inhumanity, more than a quarter of the convicts in the Second Fleet died at sea and another 15 percent expired soon after disembarking.) The Australian land was obdurate, and upon arrival many prisoners were worked in a misery of gruesome oppression. The colonial administrators often were incompetent when not actively evil, and the hellholes established for second offenders, such as Norfolk Island and Macquarie Harbor, were so grotesque that the squeamish will find even reading about them nearly impossible.

Not all convicts, perhaps not even a majority of them, suffered such torment. After the first few decades conditions on the prison transports improved. Many convicts were assigned to decent masters (for servants in city homes, "refined and literate" forgers were regarded as especially desirable), and after completing their sentences the majority of Australia's "government men" lived reasonably comfortable lives in their new homeland. Even Norfolk Island, for four short years, had a decent commandant. But the convict's lot was never easy, and transportation remained a dreaded sentence.

Four main factors brought this system to an end. The English grew ashamed of the horrors transportation had engendered. (Whisperings about the "unspeakable crime" of convict homosexuality were particularly distressing.) New prisons were built at home. Free Australians began complaining about their country's being a dumping ground for England's convict dregs. And finally, the image of Australia



Living at

Copeland Oaks

is Retirement

at Its Best!

Here, a gracious, relaxed lifestyle for active retired men and women adds quality to their senior years, respects their independence and assures them of excellent, continuing health care. It's a beautiful way of living in retirement!

- Villas (2 bedroom homes)
- Variety of accommodations
- Assisted living
- Home health care
- Medical and nursing care
- Phone (216) 938-6126

To receive our new color brochure, please mail to:

COPELAND OAKS
800 S. 15th St.
Sebring, OH 44672

Phone _____

Name _____ Address _____

City _____ State _____ Zip _____

The Fuller Brush you only buy once.

Fuller™ BRUSH CATALOG

Two reasons why you'll never part with your Fuller American Oak Natural Boar Bristle Brush:

1. Fuller builds hairbrushes to last a lifetime. They make the kind of brushes you'd *expect* from a company that has been famous for its fine brushes since 1906. These brushes are painstakingly crafted out of durable, top quality oak and carefully selected natural bristles. And, of course, Fuller guarantees your satisfaction 100%.

2. These brushes do lovely things for your hair. Fuller brushes don't just brush. Their pure boar bristles will actually improve the condition of your hair. They prevent splitting, absorb excess oil, and distribute the natural protein for cleaner, more lustrous hair. Plus, you can choose the brush just right for you:

- A. ***Professional*** — styles short or fine hair;
- B. ***Half-round*** — for long hair;
- C. ***Club*** — penetrates and polishes men's hair styles;
- D. ***Gentler*** — soft, effective brushing for delicate or fine hair.

$8.99 each

FREE . . . The Fuller Brush Mail Order Catalog!

With any purchase, we'll also send you a FREE copy of **our 48 page Fuller Brush Catalog. The catalog is packed with hundreds of top quality home care items . . .** and comes with a coupon for $3.00 off your first order!

Offer void in Puerto Rico and Hawaii

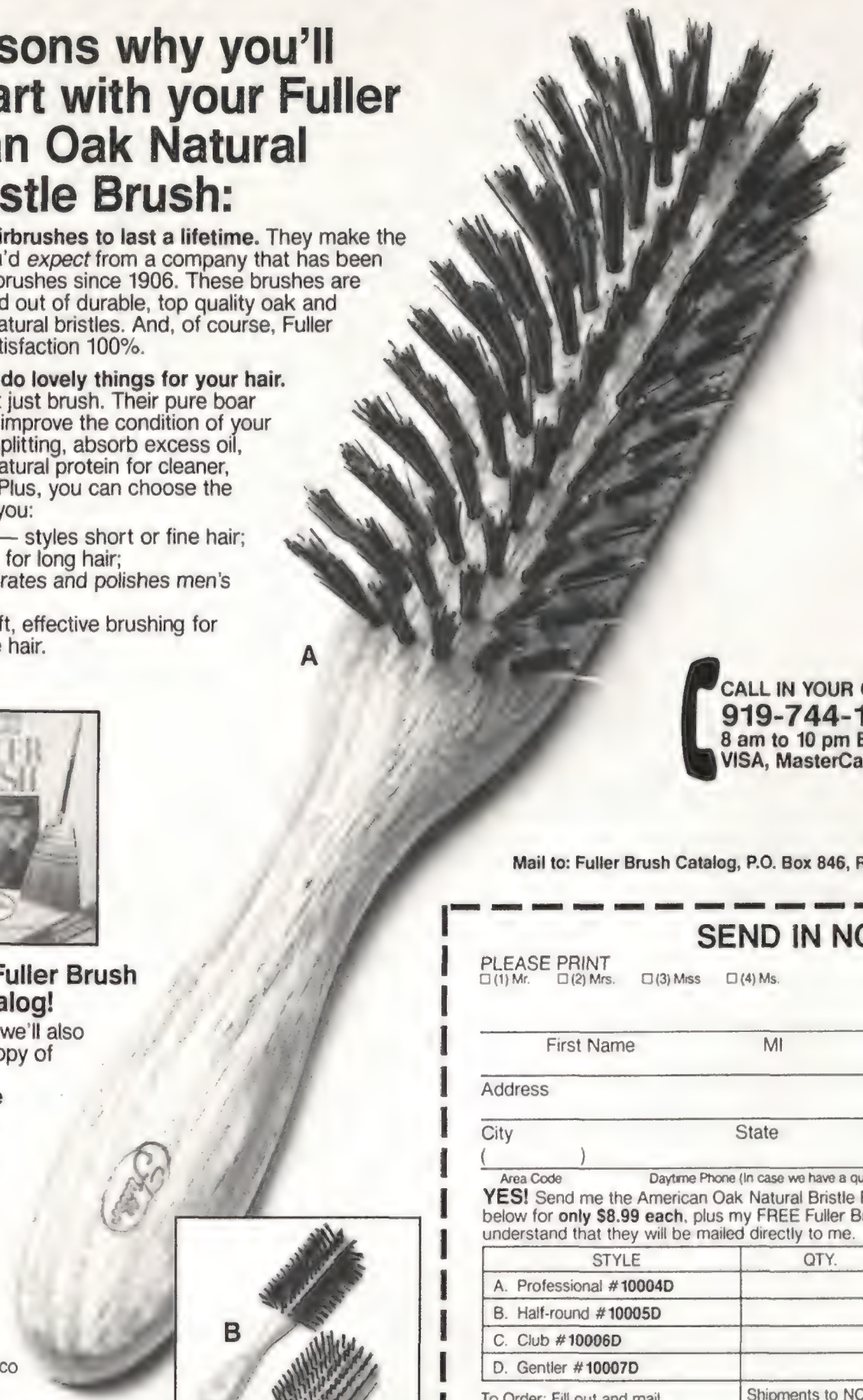
If you would like to become a Fuller Brush representative, or have one contact you, write:

Sales and Service
Fuller Brush Catalog
P.O. Box 5100
Rural Hall, NC 27098

Offer expires December 31, 1987.

©1987 Fuller Brush Catalog

FB-17(1/87)AD-10



ONLY $8.99 EACH!

CALL IN YOUR ORDER TODAY
919-744-1400
8 am to 10 pm EST, weekdays
VISA, MasterCard or CHOICE only.

Mail to: Fuller Brush Catalog, P.O. Box 846, Rural Hall, NC 27098

SEND IN NOW!

B2186

PLEASE PRINT
☐ (1) Mr. ☐ (2) Mrs. ☐ (3) Miss ☐ (4) Ms.

First Name MI Last Name

Address Apt. #

City State Zip

( ) Area Code Daytime Phone (In case we have a question about your order.)

YES! Send me the American Oak Natural Bristle Brushes indicated below for **only $8.99 each**, plus my FREE Fuller Brush Catalog. I understand that they will be mailed directly to me.

STYLE	QTY.	AMT.
A. Professional #**10004D**		.
B. Half-round #**10005D**		.
C. Club #**10006D**		.
D. Gentler #**10007D**		.
	Shipments to NC Add 5% Tax	.
	Shipping & Handling	**1.00**
	Total Amount	.

To Order: Fill out and mail coupon to:
Fuller Brush Catalog
P.O. Box 846
Rural Hall, NC 27098
Include check or money order, or fill in credit information below.

Charge: ☐ VISA ☐ CHOICE ☐ MasterCard

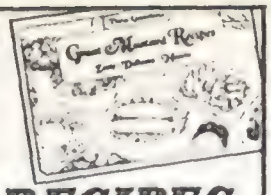
No Cash or C.O.D.'s, please.

CREDIT CARD NO. – DO NOT LEAVE SPACE BETWEEN NUMBERS. Exp. Date

Credit Card Mo. Yr.
Customer Signature

☐ **B1447 SEND YOUR CATALOG ONLY.**
Enclosed is check or money order for $1.00.

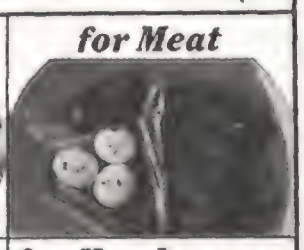
FREE GREAT MUSTARD RECIPES



An Exciting New 16 Page Book of Unique Mustard Dishes!

Limited Offer!

- Beautifully illustrated
- Crammed with delicious recipes
- Plus, a *FREE Gourmet Food Booklet!*



Your Free Recipe Book Certificate # 3007

☐ Oui, Pierre, send me my **FREE** Mustard Recipe Book and **FREE** gourmet brochure. I enclose 25¢ for postage.

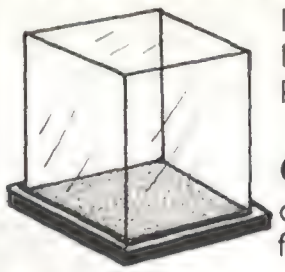
Name _____

Address _____

City _____ State _____ Zip _____

Pierre Gerardaux/Dept. E12
1690 Oak St., Lakewood, NJ 08701

DISPLAY CASES



PROTECT AND DRAMATIZE YOUR PRECIOUS WORK OF ART

CUSTOM MADE
clear lucite on a finished wood base

SEND DIMENSIONS • LENGTH • WIDTH AND HEIGHT • WE WILL QUOTE PRICE

FOR ESTIMATE OR ADVICE
CALL 804-442-2299
OR WRITE
THE DISPLAY CASE CO.
Box 8808, Exmore, VA 23350
SATISFACTION GUARANTEED

GALAPAGOS

You, 9 others and our licensed naturalist will sail by yacht to explore more islands than any other Galapagos adventure. 44 trip dates. Machu Picchu option.
FREE BROCHURE
INCA FLOATS 415-435-4622
1606S Juanita, Tiburon, CA 94920

KITES

FREE COLOR CATALOG!
Have the best flying kite in the sky.
Choose from over 140 unusual kites.
Call or write for your catalog today!
Into The Wind • (303) 449-5356
2047-R Broadway, Boulder, CO 80302

Try the gentle *push-pull* that's tough on fat...

...builds strong hearts, and firms muscle.

The Fitness Master
aerobic exerciser

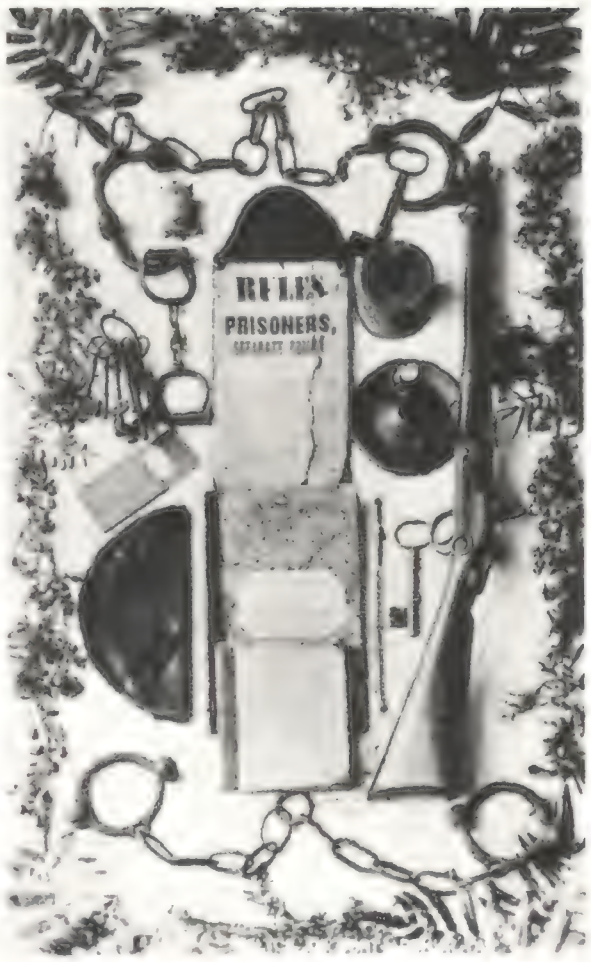
The **complete** exercise your body deserves.

Call Now Toll Free
1-800-328-8995
In Minn.: 1-612-474-0992
In Canada: 1-800-665-4872

FREE color brochure...PLUS!

BodyChallenge™ Report #1:
"Six Popular Exercises That May Be Dangerous to Your Health"
Call today...no obligation.

30-Day Money Back Guarantee
Made in the U.S.A. by
Fitness Master
Fitness Master, Inc., 1260 Park Rd., Dept. SM, Chanhassen, Minn. 55317



A 19th-century tourist postcard displays Australian approach to discipline.

changed. By 1850 the "Fatal Shore" had become "Australia Felix," a land of opportunity for potential immigrants. When the gold fields were discovered in 1851, the transportation system was doomed.

The Fatal Shore is thoroughly researched, carefully organized and eloquently written. Hughes, a native Australian and noted art critic, has a painter's eye for color and shape and an elegant feel for the telling detail. This is a long book, and one that has more than its share of gut-twisting description and gruesome statistics. But it conveys the sense of Australia's past that a lighter study would miss. This is a superb book.

John R. Alden
Anthropologist and book critic

Theodore Dreiser: At the Gates of the City, 1871-1907
Richard Lingeman
Putnam, $22.95

One of the prevailing images of American life is that of the country boy or girl, paper suitcase in hand, arriving at the bus or train station, eyes shining with expectation, ready to face and conquer the wicked and beguiling city. We all know that there's a broken heart for every light on Broadway; a 1915 song tells us that, but a more recent one in-

When you cruise the Shannon River, some of the most beautiful places in the world drift by.

Explore the Shannon River and get to know the many faces of Ireland from your own cabin cruiser. Travel through Lough Ree and Lough Derg. Visit Athlone, the gateway to the West, discover the Celtic past at Clonmacnoise and take in the magnificent countryside all around you. Be sure to stop at the river's edge to stock up on provisions and to get the local news. Have lunch at dockside or enjoy a singsong at a nearby pub at day's end. Cruising the River Shannon is like taking one of nature's backroads through the heart of Ireland.

IRELAND
The unexpected pleasures.

Shannon Cruisers approaching Athlone

Please send me your free book
"Ireland. The Unexpected Pleasures."

Name _____

Address _____

City _____ State _____ Zip _____

Mail to: Irish Tourist Board
P.O. Box 7728, Woodside, N.Y. 11377
Or call: 1-800-228-5000

SM 5007

sists that if you can make it there, you can make it anywhere. *There* is New York, of course, but it was also Chicago for a great many Midwestern young people in the late 19th century. It was Chicago for Sister Carrie and for her creator, Theodore Dreiser, although both of them took on New York as well. In his new biography of the young Dreiser, Richard Lingeman reminds us that both the author and his heroine are variations on the provincial at the gates of the city—as his subtitle says.

The two most popular versions of this perennial story—moral tales both—are about lost innocence. Success brings power, position, wealth, but a sense of incompletion and loneliness at the top; failure brings at worst dissolution, at best settling for less, both aggravated by a pride that will not let the striver return home. "Just Tell Them That You Saw Me," sings the 1895 hit by Paul Dresser, Dreiser's songwriting brother. As *Sister Carrie* indicates, Dreiser knew that the migration story was more complex than the one told by popular fiction or narrative songs like those his brother wrote. His own assault on the city told him that. Lingeman takes us through the promise and the despair of his first 35 years.

The author occasionally seems a little too dependent on Dreiser's own accounts of his youth—in *Dawn*, *Newspaper Days* and *An Amateur Laborer*—but he tells the story well, chronicling Dreiser's infinite capacity for self-doubt, setting him clearly in the contexts of Indiana towns in the 1870s, Chicago in the 1880s, New York at the turn of the century, the newspaper and magazine worlds in which Dreiser labored, and the literary community after which he hankered.

The next to youngest of ten children of a German immigrant who settled in southern Indiana, Dreiser, whose early years were comfortable, learned the lesson of poverty as his father failed in business, sinking from boss to laborer, unable finally to provide for his family. A puritanical Catholic who tried to impose his own rigidity on his rebellious brood, the elder Dreiser watched his children leave home. Paul, the oldest, became a successful comedian and songwriter, a Broadway dandy with a sentimental attachment to the banks of the Wabash and his dear old mother. He was a loving brother whom Theodore resented, presumably because he had successfully breached the gates of the city unburdened by Theodore's serious sense of purpose. The older sisters, in one of Mae West's favorite tropes, were as pure as snow but they drifted; their behavior, as well as that of the older boys, helped mark the Dreisers as scandalous. It hardly helped when the mother left to try to make a home elsewhere for the three youngest.

The family background fills only a few chapters, but its shadow lies across the entire book. Dreiser's ambition, his dream of wealth and respectability, his combination of nonconformity and guilt, his tendency to succumb to hopelessness, his need for others and the abrasiveness that pushed them away—all have their roots back home in Indiana. He began to make his own way in Chicago while he was still a boy in his teens. At 21, he found his way onto a newspaper, then moved to St. Louis, where he built a reputation as a personal journalist and comic writer and where he met the woman who would become his first wife.

At this point, a pattern of success-failure set in. He left St. Louis and made

Your place in the world.

Surrounding you with all the enchantment of Bermuda. Set amidst 250 lush acres. Completely refurbished and expanded, with 415 exquisite guestrooms overlooking beautiful Harrington Sound, pools and gardens. A spectacular championship golf course, endless watersports and tennis—all on premises—make Marriott's Castle Harbour the premier resort.

Discover your special place in the world. Marriott's Castle Harbour Resort.

Marriott People know how.

For information and reservations
call your travel professional or 1-800-228-9290.

MARRIOTT'S
Castle Harbour
A BERMUDA RESORT

GO TO THE MARKET WITH LOUIS RUKEYSER

From Apples to Xerox™, you'll see what's in store.

Louis Rukeyser and his blue chip guests will take you over the counter and behind the big board to give you insights on the market, tax reform, the U.S. economy and other issues that affect you and your money. Watch wise and witty "Wall Street Week with Louis Rukeyser" every Friday evening. It's Public Television's highest rated public affairs program. Check it out.

See your local Public Television listing for time and channel
Underwritten nationally by: Hanson Trust / Prudential-Bache Securities / UNISYS

WALL $TREET WEEK WITH LOUIS RUKEYSER

A national program service of Maryland Public Television. MPT

CRUISE THE MIGHTY

MISSISSIPPI

ON THE RIVERBOATS

TWILIGHT

OR

JULIA BELLE SWAIN

2-DAY CRUISES, MAY 24 TO OCTOBER 30

FARE: $150 PER PERSON

LE CLAIRE, IOWA (at the I-80 Mississippi River Bridge)
TO GALENA, ILLINOIS & RETURN

See the beauty of the Mississippi River from the decks of a real, old-time riverboat. Fare includes all meals, games, entertainment, trip to historic Galena, and overnight lodging at scenic and comfortable *CHESTNUT MOUNTAIN RESORT.* Ask for our free color brochure.

FOR INFORMATION & RESERVATIONS CALL TOLL FREE

In Illinois: (800) 237-1660

Outside Illinois: (800) 331-1467

OR

FILL OUT & MAIL TO:
RIVER CRUISES, P.O. BOX 406, GALENA, IL 61036

NAME _____

ADDRESS _____

CITY/STATE/ZIP _____

PHONE _____

S

Dreiser described his "semi-Roman nose, a high forehead and an Austrian lip."

his way to New York, where his local Missouri celebrity meant nothing at all; he found himself working for pennies as a space-rate reporter. Rescued from poverty and suicidal impulses by his brother Paul, he became the editor of *Ev'ry Month*, a song sheet that he made into a real magazine, and—that job having ended in a quarrel—a successful free-lance magazine writer. Emboldened by his new visibility, he turned to what he saw as his true calling, finished *Sister Carrie* and insisted that it be published, although Doubleday, Page, having accepted it, made clear that they did not want it and would not push it. With the failure of his novel, he sank into depression, unable to write, only to be resurrected as a magazine editor.

Lingeman ends this first volume of Dreiser's biography with the republication of *Sister Carrie* in 1907, the vindication of Dreiser as a serious American novelist. Although it would be four more years before *Jennie Gerhardt* appeared and Dreiser became a writer once again, this is the appropriate ending for this segment of his life—a triumphant entry into the city. Dreiser knew, Lingeman knows, *we* know that it will not all be gravy for the rest of Dreiser's life, but it is a nice, modified, Dreiserian happy ending for this chapter in the story of the Hoosier schoolboy transformed.

Gerald Weales
Professor of English
University of Pennsylvania

ARCHAEOLOGICAL TOURS
LED BY NOTED SCHOLARS

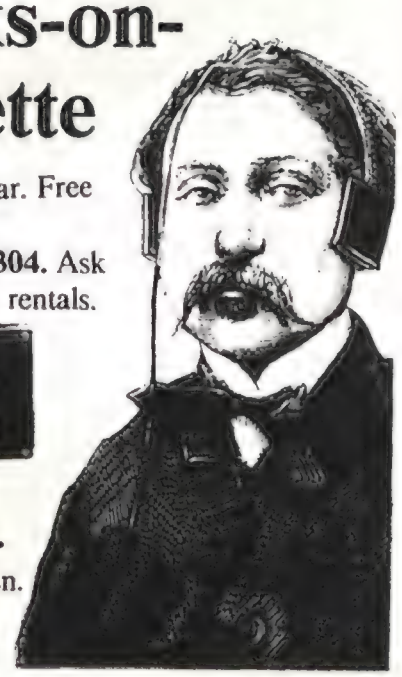
1987 TOURS:

ISRAEL *April & October*
TURKEY *May & October*
EGYPT *February & November*
INDIA *February & November*
CHINA
China/Tibet *May & September*
Ancient Capitals *May & October*
Silk Route *September*
BURMA/THAILAND *January & November*
PERU *March*
INDONESIA *March & August*
SICILY & SOUTHERN ITALY *April & May*
ETRUSCAN ITALY *May*
SPAIN & FRANCE
Caves & Castles *June*
EASTERN TURKEY *June*

archaeological tours
30 E. 42 St. Ste. 1202S, NY 10017 • (212) 986-3054

RUSSIAN LACQUER BOXES
PLEASE SEND FOR OUR FULL COLOR BROCHURE $2
LIGHT OPERA GALLERY
GHIRARDELLI SQUARE #102S
SAN FRANCISCO, CA 94109
415-775-7665

Unabridged books-on-cassette



. . . In your car. Free catalog: **1-800-638-1304.** Ask about 30-day rentals.

Recorded Books, Inc.
6306 Aaron Ln.
Clinton,
MD 20735

SWISS ALPS
Moderate DAY hiking tours, 2 or 4 weeks. Ride up above tree line and hike down. Over 50 optional length hikes basing one week at 10 charming mountain villages in 3 or 4 star hotels. Write for free brochure.
ALPINE ADVENTURE TRAILS TOURS
783H Cliffside Dr.
Akron, OH 44313
swissair

Plains Indian art, artifacts and jewelry.

Colorful, educational catalog shows over 100 beautiful examples of mounted buffalo skulls, bow and arrow sets, knives, painted buffalo and elk robes, shields, axes, lances, dance sticks, dolls, ceremonial pipes, rattles, shirts, coyote fang necklace, other bone jewelry, silver jewelry and more unique gifts, stunning decorations and collector's items from exclusive source. All are hand made with authentic materials.

Catalog tells the fascinating story of each item's place in Cheyenne, Sioux, and Blackfoot heritage. For your copy, send $2.00.

PRAIRIE EDGE DEALER INQUIRIES INVITED
PHONE SALES CATALOG REQUEST OFFICE
P.O. Box 8303, Dept. SM2
Rapid City, S.D. 57709-8303 (605) 341-4525
VISIT OUR STORES IN SANTA FE, N.M. AND DEADWOOD, S.D.

Additional reading

Metropolitan Museum (p. 46)

The New York School: A Cultural Reckoning by Dore Ashton, Penguin, 1979

American Art Since 1945 by Dore Ashton, Oxford University Press, 1982

Merchants and Masterpieces: The Story of The Metropolitan Museum of Art by Calvin Tomkins, Dutton, 1973

"The Art World: Peaks and Valleys" by Calvin Tomkins, *New Yorker*, February 23, 1987

"The Met Goes Modern: Bill Lieberman's Brave New Wing" by Kay Larson, *New York*, December 15, 1986

Cattle egrets (p. 60)

The Cattle Egret: A Texas Focus and World View by Raymond Clark Telfair II, Texas Agricultural Experiment Station (College Station), 1983

"Spread of the Cattle Egret in the Western Hemisphere" by Gilbert T. Crosby, *Bird Banding*, July 1972

"Habitat and the Modern Range Expansion of the Cattle Egret" by W. Roy Siegfried, *Wading Birds*, National Audubon Society Research Report, No. 7, 1978

Introduced Birds of the World by John L. Long, Universe Books, 1981

"Field to Factory" (p. 72)

Field to Factory: An Exhibition on Afro-American Migration 1915-1940 by Spencer Crew (exhibition catalog), National Museum of American History, Smithsonian Institution, 1987

One More Day's Journey: The Story of a Family & a People by A. B. Ballard, McGraw-Hill, 1984

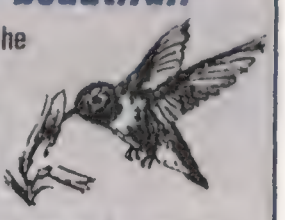
Making Their Own Way: Southern Black Migration to Pittsburgh 1916-1930 by Peter Gottlieb, University of Illinois Press, 1987

NEW!

A simple flick of the wrist provides up to 200 sq. ft. of spectacular color and fragrance.

Flowers to attract hummingbirds.

Easy, fun and beautiful!



With just a flick of the wrist, you can have elegant, colorful hummingbirds flocking to your garden. A simple way to add vibrant beauty to home landscaping, this exclusive collection contains 18 cultivated varieties of annuals and perennials. It was created under the direction of horticultural experts and contains only nectar-rich flowers...no grasses or wildflowers.

Planting is as easy as shaking the container. Seeds are mixed with vermiculite for even distribution, and guaranteed to grow in any U.S. climate, spring through fall. Covers up to 200 sq. ft. Net wt. approx. 3 oz. **$10.00 ppd.**

Shake, Scatter & Grow and Hummingbird Garden are registered trademarks of White Swan, Ltd. of Beaverton, OR.

Dept. 02128 , P.O. Box 3999, Portland OR 97208
Hummingbird Garden **No. 9362F**

Qty _____ Total $ _____ ☐ Check

☐ VISA ☐ MasterCard ☐ Am. Exp. ☐ Diners/CB

Card #_____

Exp. Date_____ Sig. X_____

Phone _____

Name_____

Address _____

City _____

State_____ Zip_____

Order TOLL FREE anytime
1-800-547-1160

☐ Send FREE "ESCAPE from the ordinary®" catalog

Norm Thompson

STEAMBOATIN.SM THE ORIGINAL AMERICAN VACATION.

Over a century ago, more than 11,000 paddlewheelers plied the Mississippi and Ohio rivers. It was an era of discovery. An era of grandeur. The Steamboatin' Era.

Today you can glide back in time and rediscover America—Steamboatin' style aboard the legendary Delta Queen and the magnificent Mississippi Queen.

FREE COLOR BROCHURE
1-800-543-1949
See your travel agent or call toll-free
or write: The Delta Queen Steamboat Co.
Dept. 5SM7 #30 Robin St. Wharf • New Orleans, LA 70130

Name_____
Address_____
City_____ State_____ Zip_____
Telephone (area code_____) _____

ANCESTRY TRACED

Burke's Peerage

will trace YOUR ancestry with the same diligence it is renowned for in tracing great families of the world

For brochure, contact: Dept. 8, Burke's Peerage Genealogical, 1 Cambridge Gate, London NW1 4JN. England Tel: 011 44 1 385 4206

$500 REWARD

Mail us your business card and we'll reward you with discount certificates worth $500 on computer and software products at over 100 stores nationwide.

Software City® 5587

1415 Queen Anne Rd., Teaneck, NJ 07666

SAIL OVER 50 YEARS MAINE

ORIGINAL MAINE WINDJAMMERS

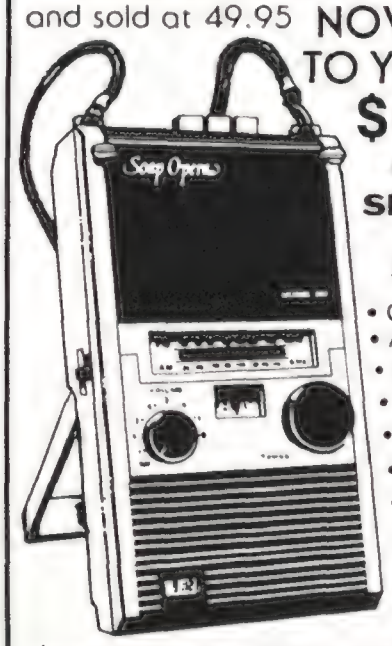
Coastal sea adventure, delicious food and wonderful sailing.

ONLY
$370–$495 p.p., per wk., all incl.
call: 1-800-MAINE-800 or write:
P.O. Box 317-N Rockport, Maine 04856

MAINE WINDJAMMER ASSOCIATION

SOAP OPERA™
CASSETTE DECK — AM/FM

Thousands nationally advertised and sold at 49.95 NOW DIRECT TO YOU ONLY $24.95



SING WHILE YOU SHOWER

- Cassette Deck
- AM/FM Radio
- Water Resistant
- Thermometer
- Hanging Strap
- Digital Clock
- Easel Stand
- Waterproof Controls

Now you can shower to your own cassette tapes. Great for the bath, shower, hang it anywhere, take it to the beach, picnics. Comes with 30-day return, 90-day warranty. 4 "AA" batteries (not included)

CALL OR SEND YOUR CHECK NOW!

•Bath with Beethoven •Shower with Chopin
•Sing with your favorites •Whistle while you wash

Name_____
Address_____
City_____ State____ Zip____
Phone ( ) _____
☐ Check Enclosed ☐ MC ☐ VISA
Card No. _____
Exp. Date _____
Signature _____

Cost $24.95
Pst/Hndlg 3.50
Total $28.45
CA Res... 1.62
Total $30.07

Caswell Bay Co.
17 Richland Ct.,
P.O. Box 927, San Carlos, CA 94070

24 Hours · 7 Days Toll Free (800) 433-1687

Titanium (p. 86)

Titanium: Past, Present, and Future by the National Materials Advisory Board of the National Research Council, National Academy Press (Washington, D.C.), 1983

"Miracle Metal" by Kevin Sanders, *Science Digest*, October 1981

Titanium Technology: Present Status and Future Trends, edited by F. H. Froes, D. Eylon and H. B. Bomberger, Titanium Development Association (Dayton, Ohio), 1985

Focus on Titanium (bimonthly newsletter), TIMET (P.O. Box 2824, 400 Rouser Road, Pittsburgh, Pennsylvania 15230)

Quilts (p. 114)

The Artist and The Quilt, edited by Charlotte Robinson, Knopf, 1983

The Quilters: Women and Domestic Art by Patricia Cooper and Norma Bradley Buferd, Doubleday, 1977

Quilts from the Indiana Amish: A Regional Collection by David Pottinger, Dutton and the Museum of American Folk Art, 1983

A Gallery of Amish Quilts: Design Diversity from a Plain People by Robert Bishop and Elizabeth Safanda, Dutton, 1976

Garden of Eden (p. 127)

The Sumerians: Their History, Culture and Character by Samuel Noah Kramer, University of Chicago Press, 1963

Looking for Dilmun by Geoffrey Bibby, Penguin, 1984

Bahrein Through the Ages: The Archaeology, edited by Shaikha Haya Al Khalifa and Michael Rice, Routledge & Kegan Paul (London), 1986

Gilgamesh by John Gardner and John Maier, Vintage, 1985

The Evolution of the Gilgamesh Epic by Jeffrey H. Tigay, University of Pennsylvania Press, 1982

Equid sanctuary (p. 138)

The Empire of Equus by David P. Willoughby, Barnes (Cranbury, New Jersey), 1974

Horses, Asses and Zebras in the Wild by Colin P. Groves, Ralph Curtin Books (Hollywood, Florida), 1974

The Last Wild Horse by Morris Weeks, Houghton Mifflin, 1977

Zoo 2000: A Look Beyond the Bars by Jeremy Cherfas, British Broadcasting Corporation, 1984

Louis L'Amour (p. 154)

Louis L'Amour by Robert L. Gale, Twayne Publishers, 1985

FOR SUBSCRIBER SERVICE:

TO CHANGE YOUR ADDRESS —

Send us an address label from a recent issue together with your new address, or fill in the information below. Please give us 6 weeks advance notice.

NAME _____
(Please Print)

OLD ADDRESS _____

CITY _____

STATE _____ ZIP _____

NEW ADDRESS _____

CITY _____

STATE _____ ZIP _____

OR – to inquire about the status of your membership-subscription dues payments, gifts, missing issues or membership cards, etc.

Please write to –

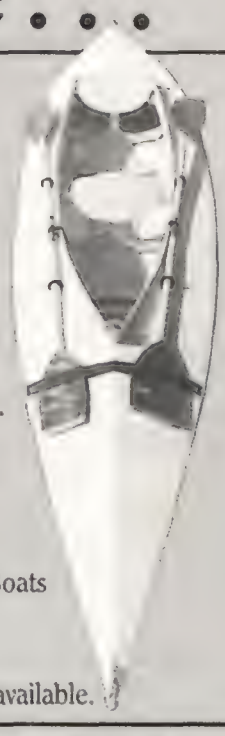
SMITHSONIAN
MEMBERSHIP DATA CENTER
P.O. BOX 55593
BOULDER, CO 80322-5593
TELEPHONE (303) 449-9609

Escape . . .

With Folbot

Catalog of Boats & Accessories

- Explore streams, rivers, lakes, and seacoasts.
- Lightweight, quiet, easy-to-paddle.
- Superior construction for years of rugged use.
- Much more stable than a canoe or kayak.
- Perfect for cruising, fishing, and family fun.



Folding, Rigid, and Kit Boats
Prices from $395

Two new rotomolded polyethelene boats now available.

FACTORY DIRECT PRICES
SATISFACTION GUARANTEED

Send $1.00 for color catalog
(Mailed First Class)
Folbot, Inc.
P.O. Box 70877, Dept. SM587
Charleston, SC 29415-0877

Name: _____

Address: _____

City: _____ State _____ Zip _____

Smithsonian highlights

Planning a Smithsonian visit?

The Associates' Planning Packet, brimming with helpful information, is yours for the asking; call or send postcard to Associates' Reception Center, Smithsonian, Washington, D.C. 20560; (202) 357-2700 or TDD for hearing impaired (202) 357-1729. Begin your visit at the Associates' Reception Desk in the Castle.

Extended summer hours

Five Smithsonian museums on the Mall will have extended summer hours from Memorial Day weekend until Labor Day weekend (May 23-September 7). Four of them—NMAH, NMNH, HM&SG and the Castle—will be open each day until 7:30 P.M. The fifth, NASM, will be open daily 10 A.M. to 9 P.M.

The National Zoological Park will have its own summer schedule. From May 1 through September 15, the Zoo grounds will open at 8 A.M. and close at 8 P.M., and the buildings will open at 9 A.M. and close at 6 P.M. daily.

Special May exhibits and events

Anacostia Neighborhood Museum
Contemporary Visual Expressions (May 17-July 31) See *Highlights continued.*

National Portrait Gallery
Portraits from the American Academy and Institute of Arts and Letters (May 29-September 20) Works by William Merritt Chase, Augustus Saint-Gaudens, others.

National Museum of American Art
Treasures from the National Museum of American Art (May 7-July 19) Works from Colonial to contemporary times.

HAND BLOWN HAND CUT FULL LEAD CRYSTAL
ATLANTIS
BY CRISAL PORTUGAL, FOR BLOCK

FLIGHT

Motion in Crystal. A swirling pattern free as a bird, that lifts off leaving a trail of shimmering reflections. The Atlantis *Flight* pattern is designed by Gerald Gulotta for Block and is handblown and handcut full lead crystal by Crisal, Portugal. Pictured above are goblet and flute $32.50 each. Send .25 for colored brochure of Atlantis stemware patterns.

BLOCK
Block China Corporation
41 East 26 Street, New York, NY 10010 (212) 686-7440

¡Speak Spanish like a diplomat!®

What sort of people need to learn a foreign language as quickly and effectively as possible? *Foreign service personnel,* that's who. Members of America's diplomatic corps are assigned to U.S. embassies abroad, where they must be able to converse fluently in every situation.

Now you can learn to speak Spanish just as these diplomatic personnel do — with the Foreign Service Institute's Programmatic Spanish Courses. You'll learn Latin American Spanish recorded by native speakers.

The U.S. Department of State has spent thousands of dollars developing this course. It's by far *the most effective way* to learn Spanish at your own convenience and at your own pace.

The course consists of a series of cassettes and accompanying textbook. Simply follow the spoken and written instructions, listening and repeating. By the end of the course, you'll be learning and speaking entirely in Spanish!

This course turns your cassette player into a "teaching machine." With its unique "programmatic" learning method, you set your own pace—testing yourself, correcting errors, reinforcing accurate responses.

The FSI's Programmatic Spanish Course comes in two volumes, each shipped in a handsome library binder. Order either, or save 10% by ordering both:

☐ **Volume I: Basic.** 12 cassettes (17 hr.), manual, and 464-p. text, $135.
☐ **Volume II: Intermediate.** 8 cassettes (12 hr.), manual, and 614-p. text, $120.

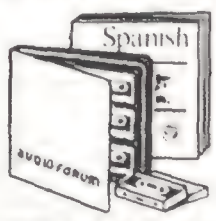
(CT residents add sales tax)

TO ORDER BY PHONE, PLEASE CALL TOLL-FREE NUMBER: **1-800-243-1234.**

To order by mail, clip this ad and send with your name and address, and a check or money order–or charge to your credit card (AmEx, VISA, MasterCard, Diners) by enclosing card number, expiration date, and your signature.

The Foreign Service Institute's Spanish course is unconditionally guaranteed. Try it for three weeks. If you're not convinced it's the fastest, easiest, most painless way to learn Spanish, return it and we'll refund every penny you paid. Order today!

130 courses in 46 other languages also available. Write for free catalog. Our 15th year.



Audio-Forum
Room K 540
On-The-Green,
Guilford, CT 06437
(203) 453-9794

AUDIO-FORUM®

Cooper-Hewitt Museum
Frank Lloyd Wright and the Johnson Wax Buildings: Creating a Corporate Cathedral (May 12-July 19) Drawings, lithographs, furniture, decorative arts.

Hirshhorn Museum & Sculpture Garden
Morris Louis (May 21-July 26) Fifty paintings including "Veil," "Floral," "Unfurleds" and "Stripes" series.

National Museum of Natural History
The Far Side of Science: Cartoons by Gary Larson (through May 31) More than 500 of his wackiest.

National Air and Space Museum
Born in the Milky Way (May 20, 7:30 P.M.) Lecture by Alan Dressler, astronomer at Mount Wilson and Las Campanas Observatories.

Renwick Gallery
American Art Deco (through July 26) Includes 180 works in various media.

Exhibition catalogs

Catalogs available at this time include:
Morris Louis (paper, $18.95)
Treasures of the National Museum of American Art (cloth, $39.95; paper, $19.95)
Quilts from the Indiana Amish (paper, $15.95)
Gene Davis, A Memorial Exhibition (cloth, $49.50; paper, $24.95)

To order, send check or money order to Museum Shops, Box 44083, Washington, D.C. 20026-0083. Include 15 percent of total purchase to cover postage and handling (minimum, $1.75).

Lecture and Seminar Program

Pleasantville, New York, will host the Lecture and Seminar Program, May 6-10. The series will include lectures on sculpture gardens, a workshop on telescope construction and seminars on aviation, nature photography and historic preservation. For further information, write to the Lecture and Seminar Program, 1100 Jefferson Drive S.W., Washington, D.C. 20560; or call (202) 357-1350.

Smithsonian on the air

Radio Smithsonian: Features on this weekly series include "Connoisseurship and Collecting" of fine artworks and antiques, and "The Constitution; Youth and Justice," in which teens debate constitutional issues with scholars.
Smithsonian Galaxy: Short radio features explore history, science, art.
Here at the Smithsonian: Short TV features go behind the scenes.

To find out what stations in your area carry these programs, write Office of Telecommunications, MAH Room BB40, Washington, D.C. 20560.

The United States Constitution

On May 18-23, the Office of Smithsonian Symposia and Seminars will hold an international symposium on the Constitution. Presentations by more than 70 internationally recognized scholars, educators and jurists will take place at the University of Virginia and in Washington. The public is invited to attend; for more information contact Neil Kotler at (202) 357-2047.

Resident Associate Program

To become a Resident Associate, or for fee and ticket information, call 357-3030. Here are some May events:
Smithsonian Chamber Players: Schubertiade II (May 8, 10; 8 P.M.) Gala all-Schubert concert.
Rutan and Yeager at the Smithsonian (May 14; 7 P.M.) Firsthand account of their recent around-the-world flight.
Emerson String Quartet (May 16; 7 P.M.) Concert of Beethoven quartets.
Elizabeth Wolff, Pianist (May 17; 7 P.M.) Third concert in Pro Musicis series, featuring Chopin, Beethoven.
Alive and Kicking! (May 17, 7:30 P.M.) Clarinetist Tommy Gwaltney salutes the Jimmy Noone's Apex Club Orchestra.

Smithsonian Institution Traveling Exhibition Service

SITES circulates exhibitions to hundreds of cities outside Washington. To sponsor a show in your community, write SITES, Smithsonian, Washington, D.C. 20560. Here are some May exhibits:
Boise, Idaho (May 16-June 14) *Mark Twain and Huck Finn: Joy-Flags and Milestones*, Idaho State Historical Society.
Easton, Maryland (May 2-August 23) *Savory Suppers and Fashionable Feasts: Dining in Victorian America*, Historical Society of Talbot County.
Indianapolis (May 2-31) *Remaking America: New Uses, Old Places*, Union Station, Index Museum.
Miami, Florida (May 2-19) *Haiti: The First Black Republic and Its Monuments to Freedom*, Model City Cultural Arts Center.

You can move mountains.

There's nothing you can't do. With the right resources. The right guidance. Today your Prudential representative can show you a new world of financial opportunities. Look to The Rock℠ for stocks and bonds,* CDs* and mutual funds.* Feel its strength in retirement plans, home equity loans* and insurance. Today, The Prudential touches so many areas that touch you. Move forward with The Rock.

*These products available through subsidiaries of The Prudential: Prudential-Bache Securities, The Prudential Bank & Trust Company and Pruco Securities Corporation, Newark, New Jersey. CDs and home equity loans available in most states.

The Prudential

Insurance & Other Financial Services

Highlights continued

Powerful vision at Anacostia

Now in its new home, the Smithsonian's neighborhood museum celebrates with an exhibit of four Afro-American artists

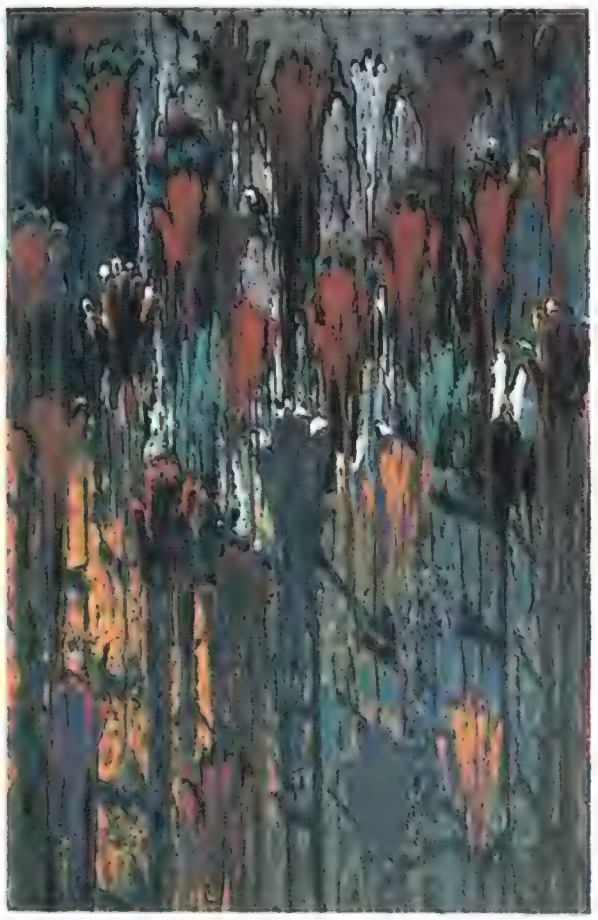
For 20 years since its founding, the Smithsonian's Anacostia Neighborhood Museum has served its local residents with exhibitions and programs about the history, culture and contributions of Afro-Americans. Now the museum has moved from its old quarters—a former movie house—to a new building in Fort Stanton Park. It will celebrate the reopening at its new location on May 17 with an exhibition curated by David C. Driskell, professor of art at the University of Maryland. "Contemporary Visual Expressions" will present works by artists Sam Gilliam, Martha Jackson-Jarvis, Keith Morrison and William T. Williams.

In spite of the obvious differences in medium and style, all four artists are exploring, in the words of Jackson-Jarvis, the "height and breadth of the human spirit as it struggles to continue." Jackson-Jarvis, for example, had in mind the rites of passage—birth, death and rebirth—with her ceramic wall installation, while Jamaican-born Morrison deals in his figurative art with such questions as "Why I have never been able to shed the foibles, fears and passions of my childhood." The show runs through July 31. *Constance Bond*

Martha Jackson-Jarvis' 1984 work is titled *Path of the Avatar/Spiraling Passages.*

African textiles inspired this free-form painting, *Saga* (1986), by Sam Gilliam.

Spirituals (1986) by Keith Morrison is a watercolor; he finds themes in the folklore, myths of his native Jamaica.



A Note to Marcel Proust by Williams; he thinks that art derives power from a culturally-defined belief system.

STAYING POWER

HEAVY STARCH, HURRY.

Getting things done on the road can be one hangup after another.

But staying with Radisson gives you the power to make things happen in a hurry.

From a fresh shirt in the evening to fresh eggs in the morning, we'll hustle to get it to you the way you want it. With a smile.

At Radisson, *Yes I Can!*℠ is more than a watch-word. It's a formal training program designed to create an understanding of business travelers' expectations. And instill the attitudes and know-how it takes to meet them.

If you're tired of making requests with your fingers crossed, next time pack some power. And stay with Radisson.
1-800-228-9822

The Radisson Hotels

© 1987 Radisson Hotel Corporation

Join with other Smithsonian Associates

Travel and Study, at Home, Abroad . . . and in

As a Smithsonian Associate, you can enjoy the benefit of culturally oriented experiences under the guidance of museum curators or visiting scholars. Your lively curiosity and broad interests have resulted in a comprehensive study program to meet many tastes and budgets.

Save on telephone rates: request tour brochures by calling (202) 357-4700 during low-rate hours.

Domestic Study Tours

New England and Hudson River Cruise May 30-June 13: Aboard the *Newport Clipper*, sail from Boston to New York. Visit West Point, Nantucket and Newport. Dine at the Vanderbilts' Marble House.

Bryce, Zion and the North Rim of the Grand Canyon June 4-14 and August 31-September 10: Hike canyon trails to admire foliage, wildlife and geological history.

Chicago June 17-21: Walking tours and special programs to study the city's stunning architectural legacies.

Civil War—the Eastern Theater June 18-28: Beginning in Washington, D.C., travel to Richmond, the Shenandoah Valley and Gettysburg to retrace the events of the war.

Grand Canyon July 3-13: View magnificent landscape while rafting down the Colorado River with expert boatmen.

Sojourn in Santa Fe July 19-26: Leisurely explore pueblo villages and scenic sites.

Pacific Northwest August 4-15: A new cultural tour of Seattle, Vancouver and Victoria for art and history enthusiasts.

Alaskan Landscapes August 6-17: Hike in Denali National Park, float down the Kenai River and meet Eskimo artists in Nome.

Middle Fork August 7-15: An unforgettable river trip on Idaho's Salmon River.

Lewis & Clark Trail August 8-15: Enjoy Idaho's spectacular wilderness scenery as you follow portions of the overland 1805 trail by horse and vehicle.

Alaska's Inside Passage August 18-25: Informal cruise from Ketchikan to view wildlife and glaciers at close range.

Colorado Mining and Railroads August 20-29: Relive the Gold Rush days when steam locomotion opened the West.

Maine September 19-28: Rocky coasts, pine forests, mountain vistas await you on this invigorating hiking tour for all ages.

Philadelphia October 1-4: Focus on the 200th anniversary of the U.S. Constitution while exploring the city's proud past.

California Delta Cruise October 9-12: Cruise in the wake of the Gold Rush sternwheelers. Start from San Francisco to discover the Sacramento and San Joaquin rivers rich in history and legend.

New York Architecture—From Cast-Iron to Post-Modern October 22-25: Enjoy a weekend of walking tours, theater and a private cruise around Manhattan.

Washington "Anytime" Weekend Discover your capital city in Smithsonian style with this convenient and economical two-night package. Reserve tour by phone with your Visa or MasterCard. Be sure to see the "Helga Pictures," May 24-September 27.

Foreign Study Tours

People's Republic of China Follow the Silk Road, climb sacred peaks, cruise the Yangtze, travel by train, study decoration and antiques or visit Tibet. Tours for new and repeat China travelers.

Irish Walk May 15-27 or September 24-October 6: Stay in castles and take day hikes through a variety of settings in the Ring of Kerry and Connemara.

Odyssey of Flight June 3-15: An aviation tour of England and France. See the world's finest aviation museums and flying demonstrations. Includes the Paris air show.

Wild Highlands of Scotland June 4-22: Enjoy the outdoors while studying this area's cultural and natural history.

Trans-Siberia June 18-July 9: Journey by rail across Siberia from east to west, then choose from excursions to Outer Mongolia, Central Asia or the Caucasus Republics.

Lakeland Hikes June 19-July 3: Hike and explore this corner of England so beloved by writers and artists.

Finnish Summer July 11-26: Attend the Savonlinna Opera Festival, then explore southeastern Finland with its spectacular scenery, castles and museums.

Scotland by Train July 11-26 or August 1-16: Travel by trains and steamers from Edinburgh and Inverness to the wild highlands, mountain lochs, Skye and Glasgow.

Iceland July 25-August 9: An adventure tour that circles this austere, beautiful land. Study unique geology, plant and bird life.

Voyage to Northern Lands August 15-29: Cruise from Iceland to Greenland and Newfoundland, then up the St. Lawrence River to Quebec and Montreal.

Alpine Hike August 16-30: A challenge for adventurous hikers through the majestic mountains and valleys of Switzerland.

London and the English Countryside August 30-September 13: Design your own nine-day London program, then enjoy five extra days on a countryside excursion.

Oxford Smithsonian Seminar September 11-26: Be an Oxford scholar. Attend classes and field trips.

Canadian Rockies September 14-23: Glacial mountains, canyons, hot springs and great resorts beckon hikers to Banff, Jasper and Lake Louise.

Scandinavian Design—Past and Present September 20-October 4: Enjoy a wealth of artistic expression. See museums, galleries, design ateliers, artists' studios.

In Pursuit of Brazil October 6-23: An enormous land of contrasts and exuberance to fascinate you. Includes Rio de Janeiro, Brasília and Iguaçu Falls.

Highlights of Austrian Civilization October 10-25: Live in a baroque palace in Salzburg and a charming hotel in Vienna while studying music, art and history.

Japan Journey October 11-24: An excellent introduction to Japanese culture in Kyoto, Tokyo and the countryside.

Paris and the Rhône River Valley October 12-25: Study art and history. Start in Paris, then cruise the Rhône River from Lyon to Provence, stopping in Avignon, Arles, Orange and Nîmes; finish in Cannes.

Write Smithsonian National Associates, 1100 Jefferson Drive, SW, Washington, DC 20560 or call (202) 357-4700 for tour brochures

Washington

Smithsonian Seminars

Travel to North Carolina's splendid Blue Ridge Mountains, spend an exciting week in Washington, D.C., or visit Wisconsin as you enjoy stimulating seminars in the company of fellow Associates who share your special interests.

Appalachian State University
June 22-26

Story, Lore and Song
Experience Appalachia's rich folk culture in the company of scholars and singers. Visit with local storytellers and instrument makers who will share time-honored traditions with you.

The Magical World of Minerals and Gems
Learn how minerals and gems form, view specimens through the scanning electron microscope and collect your own samples during a daylong field trip in the Blue Ridge Mountains.

Southeastern Indian Cultures
Trace the history of this region's native Americans through lectures, films and a visit to an important archaeological site.

Washington, D.C.
June 29-July 3

Photojournalism
Smithsonian photographers and guest experts will introduce you to the fundamentals of photojournalism as you document life in the nation's capital.

Garden Planning and Design
Visit Dumbarton Oaks, Hillwood and the Smithsonian's new Enid A. Haupt Garden. Tour Longwood Gardens in Pennsylvania with horticulturist James Buckler.

Sculpture in Washington, D.C.
Enjoy masterpieces at the Hirshhorn Museum, Museum of American Art, National Gallery of Art and the Corcoran Gallery of Art during lectures and tours by Smithsonian curators.

Space is still available in the Smithsonian Seminars at the University of Wisconsin—Madison, May 28-31. Featured topics are Native Americans in U.S. History, Bio-Diversity, and Exploration in Space. All seminars include opening receptions, reading materials and field trips to related sites. Hotel or campus housing is optional.

or (202) 357-1350 for seminar brochures.

Give him the actual newspaper printed the day he was born

FREE Catalog Upon Request.

It's the ORIGINAL COMPLETE EDITION! Not a reprint!

Subject to availability

Just think how he or she will thrill when reading of the other events that occurred on the day they were born or married. Valuable and rare, these **old, original** papers make unique gifts **for birthdays, anniversaries**—every occasion! Not just front pages or reproductions, but ***ACTUAL*** and complete* editions of newspapers printed in major US cities 1880—1986. Each comes with a certificate of authenticity.

Authentic Newspaper only, **$34.50†**
Authentic Newspaper with **Personalized Leatherette Presentation Case, $65.††**
Enclose name of recipient to be embossed in gold.
Authentic Newspaper in **Gold-Leaf Frame, $89.50†††**

ORDER TOLL-FREE
1-800-221-3221, Ext. 665
In N.J. 1-201-381-2332, Ext. 665

By Mail: HISTORIC NEWSPAPER ARCHIVES
Dept. 35, 1582 Hart St., Rahway, NJ 07065.
†Add $3.95 UPS. ††Add $4.95 UPS.†††Add $6 UPS.
(NJ resident add 6% tax) Major Credit Cards Accepted.
*Sat/Sun papers (news sects only) Historical dates priced higher.

CHAPEL HILL, NORTH CAROLINA.
Retire to the midst of a 625 acre farm full of bluebirds, hollyhocks, belted galloway cows, shops, a country inn, and families of all ages.
Free brochure.
Call 800-334-5475.
Box 111S, Chapel Hill, NC 27514
FEARRINGTON

The ADIRONDACK CHAIR
2 Classic Designs—All Redwood Partially Assembled—Also Love Seat, Footrest, Deck Cart & Table —Send for Free Catalog
Cypress Street Center
Dept. Sn, 350 Cypress St.
Fort Bragg, CA 95437 • 707-964-4940

MAKES YOU ALMOST 2" TALLER

SIZES: 5-11
WIDTHS: B-EEE
FINE MENS' SHOES

Looks just like ordinary shoes except hidden inside is a height increasing innermold. Choose from a wide selection of Elevators, including dress shoes, boots and casuals. Satisfaction guaranteed. Exceptionally comfortable. Call or write today for your FREE color catalog so you can look 2" taller in almost no time. TOLL FREE 1-800-343-3810
ELEVATORS®
RICHLEE SHOE COMPANY, DEPT. SM75
P.O. Box 3566, Frederick, MD 21701

100% Cotton Featherket™

Introducing a breakthrough in summer sleeping comfort — our 100% Cotton Featherket. A lightweight blanket filled with fluffy white feathers (90%), it's the perfect bedcovering for warm weather sleeping. We added 10% down to give it a soft, luxurious feeling. A featherket is an all natural sleep system that offers the breathability of down and feathers in a soft 232 thread count 100% cotton cover, without the weight of a synthetic blanket.

Unlike synthetic bedcoverings which trap heat and moisture, white fluffy down and feathers "breathe." Air circulates between the down and feather fibers in our Featherket, keeping you cool and comfortable. And for even greater breathability, we used a natural 100% cotton fabric for our Featherket's shell.

We're confident you'll agree that our 100% Cotton Featherket is perfect for warm weather sleeping. If you're not completely satisfied with it, simply call our toll free number. We'll send a UPS truck to your home to pick it up — **at our expense** — and we'll send you a refund (in full) or exchange.
Fast Delivery: We ship within 24-48 hours.

FREE CATALOG
- 26 Down Comforter Styles
- Down Pillows
- Duvet Comforter Covers
- 100% Merino Wool Mattress Pads

TO ORDER OR TO REQUEST A FREE CATALOG CALL TOLL FREE
1-800-356-9367, Ext. X497,
or use our coupon (call 7 days a week).

The Company Store®

FEATHERKET Style #C210
Colors: Mint, Peach or Yellow
☐Twin (60" x 86") $69 ☐King (102" x 86") $109
☐Full/Queen (86" x 86") $89

TO ORDER CALL TOLL FREE
1-800-356-9367, Ext. X497.
Use your credit card. OR ORDER BY MAIL:
☐M.C. ☐VISA ☐Am.Exp. ☐Diners Club ☐Check
Acct.#_____ Exp.Dt.____

COLOR	QTY	PRICE	
_____	____	× _____	=$_____
_____	____	× _____	=$_____
		Delivery in MN-6% Tax, IL-5% Tax	=$_____
		Ship., Hdlg., & Ins. Featherket- $5 ea.	=$_____
		*Federal Express Service	=$_____
		TOTAL	=$_____
		For delivery in WI-5% Tax	=$_____
		Total for delivery in WI	=$_____

*☐We ship UPS ground service unless you request otherwise here. Federal Express Service add $8.50.

Name _____
Address _____
City,State,Zip _____

Send to: The Company Store, Dept. X497, 500 Company Store Road, La Crosse, WI 54601.

By Richard Wolkomir

'Wafted to Mars, he fights four-armed green Tharks'

"I used to take out seven books at a time from the library," S.J. Perelman once confessed, "and sit in the kitchen, with my feet in the oven, eating cookies and reading trash."

Right move, S.J. As a former junk-literature junkie myself, I know you can't kick the habit until you publicly admit you're hooked. Space operas, mysteries, oaters, fan-at-the-bodice romances—whatever has you in its clutches, own up. Recount the plots until you blush for shame and vow never again to abuse your mind with such swill.

My own addiction began at age 8, with *Tarzan of the Apes*. My mind fizzed with images of chatty primates swinging on lianas. I snorted heavy stuff, too, junk-lit classics like *Robinson Crusoe* ("Me die when you bid die, master," said Friday), *Treasure Island* ("Yo-ho-ho, and a bottle of rum!") and *King Solomon's Mines* ("'*Koom! Koom!*' he ejaculated"). I OD'd on Sherlockiana, greeting strangers with statements like "beyond the obvious facts that you are a bachelor, a solicitor, a Freemason and an asthmatic, I know nothing whatever about you."

Then I hit bottom: comic books. Memory blurs. I see gangsters tommy-gunning their way to the moral: CRIME DOES NOT PAY. Mesomorphic superheroes walk city streets in tights and capes without anyone pointing and giggling. A pathetic monster-hero rises from a city dump, the sad product of household chemicals and industrial wastes reacting with discarded cold cuts.

On under-the-covers-with-a-flashlight science-fiction expeditions, I met advanced Betelgeusean gnats speaking BBC English. I popped whodunits like amphetamines. But I'm off the stuff now. After joining a Great Books Discussion Group, I'm into Aristotle and Kant. It feels good to wake up clean.

I think back to those lost decades when I mainlined books like *Tom Swift and His House on Wheels* ("Bless my opera glasses! It's Tom Swift!" said Mr. Damon), while my poor mind orbited Alpha Centauri. I wonder, why?

Elvis Presley, accepting an award from the Jaycees, said that as a kid, he had been a dreamer and had read comic books. In every story, he said, "I was the hero." It's true. Trash-lit can waft you on currents of overwrought prose to lurid realms of derring-do.

In the land of Trash, villains are totally rancid, so that a hero like Tarzan can beat his chest guiltlessly after dispatching a foe, and howl the good howl. Trashland's moral accounting always balances, blackguards rebuked, laurels to the brave. The race is always to the Swift, Tom or otherwise.

Trashland also is soothingly predictable. When trouble bubbles, Clark Kent invariably pops into a phone booth to change into Superman, and he never bangs his elbows pulling off his pants. Why Clark needed phone booths to molt into Superman, or why Superman needed Clark, I never knew or cared. Batman, Spiderman, they all had secret identities, just as all private eyes talked tough and ironic, and good cowboys eschewed black haberdashery—except Hopalong Cassidy, who at least had white hair. And the heroines of Trashland were always stunning and chaste, although skimpy dressers.

It's all come back to me because I found a boxful of old books in our attic. I pulled out *A Princess of Mars*, the first in Edgar Rice Burroughs' Martian series. Again I was on the Red Planet, locally known as "Barsoom." What a plot! John Carter, an ex-Confederate officer, battles Apaches in Arizona, inhales vapors in a cave and sees a red star. ". . . it was Mars, the god of war, and for me, the fighting man, it had always held the power of irresistible enchantment," he says.

Wafted to Mars, he fights huge four-armed green "Tharks." But their rifles that shoot "radium" bullets 300 miles are of little threat to Carter, who can jump 60 feet because his "earth muscles" are overwhelming in Mars' weak gravity. Says he, "I have never regretted that cowardice is not optional with me." He becomes a Thark warrior, riding eight-legged "thoats." Meanwhile the Tharks capture Dejah Thoris, Princess of Helium.

Naturally, she is gorgeous. And, like all Burroughs heroines, she haughtily disdains the hero. But he vows to save her, for the Thark idea of fun is torture. Pondering their noisome ways, he gloomily notes, "In one respect at least the Martians are a happy people; they have no lawyers."

Carter fights King Kong-size white apes, wrestles bellicose Tharks, is put in a dungeon. ". . . cold, sinuous bodies passed over me when I lay down, and in the darkness I occasionally caught glimpses of gleaming fiery eyes, fixed in horrible intentness upon me," he says. He broods over Dejah Thoris, "a woman who was hatched from an egg." But Cupid wins: Carter becomes a Prince of Helium and a doting husband to the oviparous lady. "In a golden incubator upon the roof of our palace," he reverently explains, "lay a snow-white egg."

I'm clean now, ready to plunge into *The Mill on the Floss*. First, though, for the sake of scholarship, I may just scan *The Warlord of Mars*, in which John Carter battles his way into the Temple of the Sun, where Dejah Thoris is a captive. It's nip and tuck from the Valley Dor to the dread Carrion Caves, John fighting triumphantly beside his hatched son Carthoris.

P.S. Cancel my appointments. And tell the folks at Great Books that something's come up. It looks like I'll be missing the next meeting.

Sterling. The Dream Is Born.

The style and comfort are unmistakably British. The performance comes from a new V-6 engine specially-built by Honda. Together they advanced the state of the European luxury road car.

Sterling comes equipped with every luxury you should expect in a European road car, and many you should demand. Rich burled walnut. Supple Connolly leather and the Bosch Anti-lock Braking System (ABS). Electric moonroof. Air Conditioning. Power windows. Cruise control. A six-speaker high fidelity system. Remote infrared locking and an advanced security system.*

"A Mercedes owner would consider it keenly priced, especially when looking at all the goodies... I can even see Sterling giving Jaguar cause for worry."

—The London Financial Times.

The heart of Sterling's sophisticated performance is Honda's Formula One bred 2.5 liter, V-6 engine. Sterling sprints the traditional benchmark of 0-60 in 8.8 seconds, and will reach 130 should law in the fast lane ever permit.

"With the possible exception of the Concorde, no machine so nicely put together has ever before come out of England."

—Car & Driver Magazine.

*Before your Sterling leaves the factory, it receives over 900 quality checks. Then it's covered by a 36 month/36,000 mile limited warranty.** And we've added Sterling Plus℠ nationwide 24-hour emergency road service and travel assistance.†*

For the name of your nearest Sterling dealer, call **1-800-622-0550.** *In Illinois, call* **1-800-622-0440.**

And come drive beyond your dream of what a luxury road car can be.

Sterling 825S $19,000. Sterling 825SL $23,900.‡

STERLING

**Both standard on the 825 SL and available as an extra-cost option on the 825S.*
***See dealer for details on unlimited warranty and Sterling Plus.℠*
†Sterling Plus is a service mark of Austin Rover Cars of North America and is offered in cooperation with Cross Country Motor Club.
‡Manufacturer's suggested retail prices. Actual prices set by dealer. Taxes, license, freight, dealer prep, options and other dealer charges extra. Prices may change without notice.

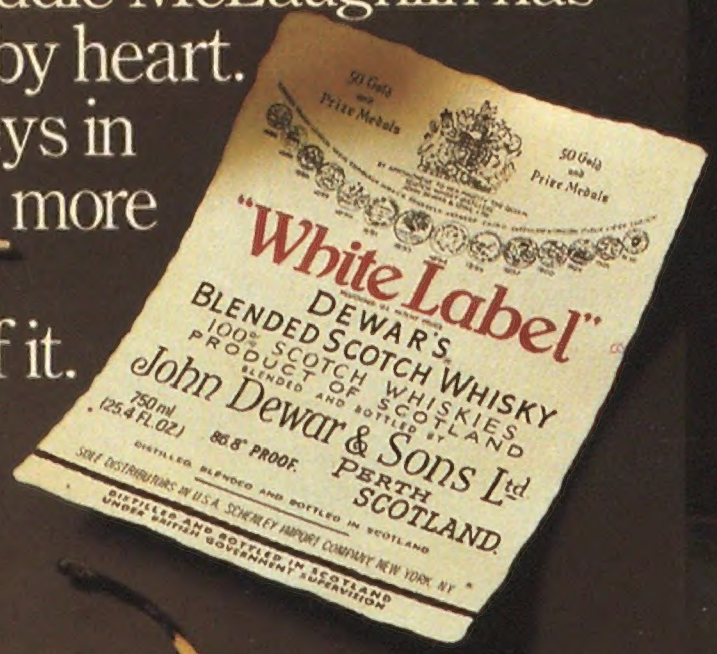
©1987 Austin Rover Cars of North America

For as long as he can remember, Eddie McLaughlin has known Robert Burns' "Tam o' Shanter" by heart.

And if you stop into The Cross Keys in Douglas, Scotland of an evening, he'd be more than happy to speak his piece.

All two hundred and twenty-four lines of it.

The good things in life stay that way.



DEWAR'S®
"White Label"®
never varies.

Authentic.
The Dewar Highlander

86.8 PROOF · © 1986 SCHENLEY IMPORTS CO., N.Y., N.Y.